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PAPERS and TALKS

Presented and
delivered at the
Summer School of Linguistics
1970

CENTRAL INSTITUTE OF INDIAN LANGUAGES
MANASAGANGOTRI
MYSORE 6

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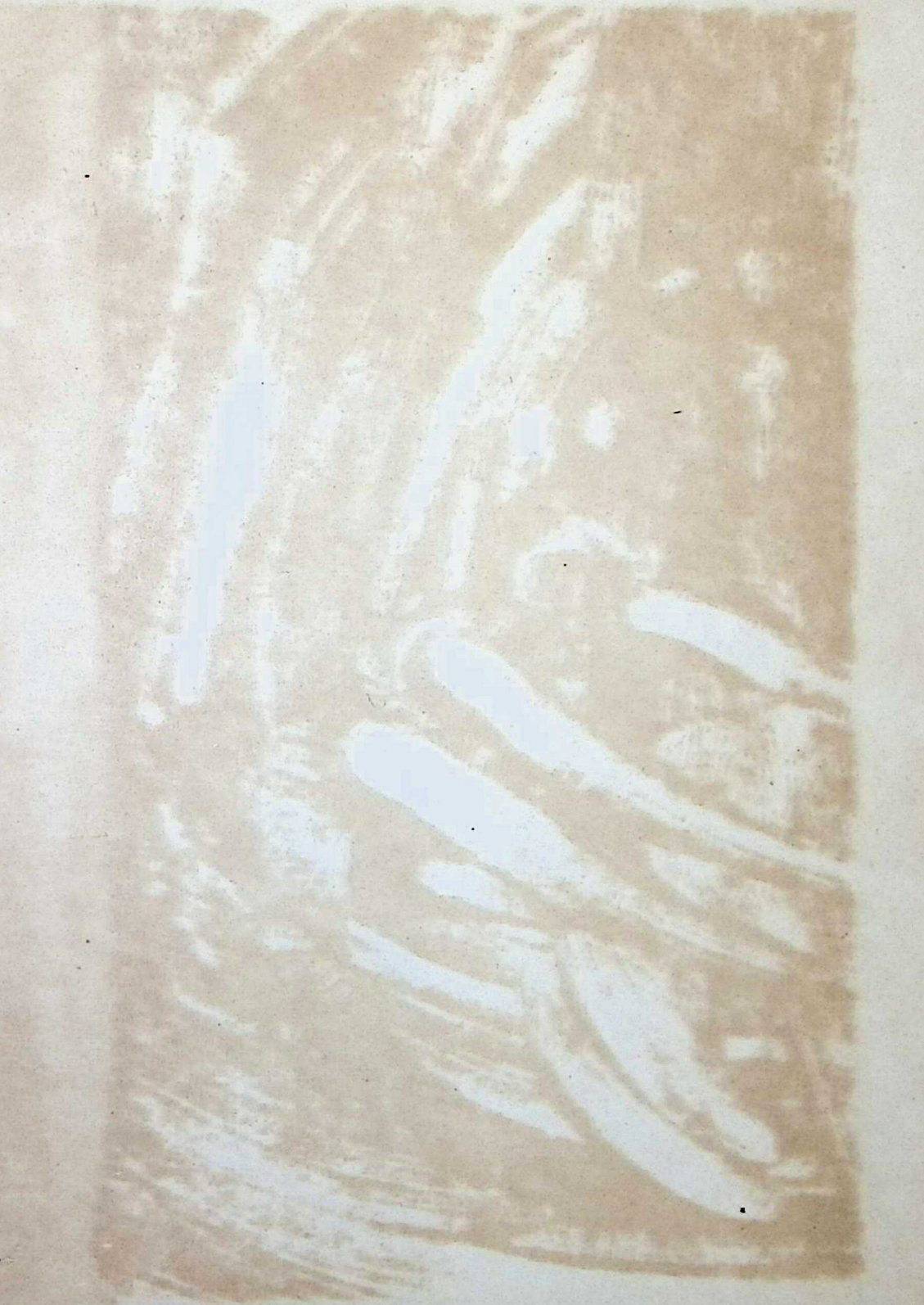

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PAPERS AND TALKS

Edited by

DR H. S. BILIGIRI

CENTRAL INSTITUTE OF INDIAN LANGUAGES
MANASAGANGOTRI, MYSORE 6

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PAPERS AND TALKS—PRESENTED AND DELIVERED AT THE SUMMER SCHOOL OF LINGUISTICS, 1970. Pp. viii + 142, Ry. 8vo

© First published 1971

Price Rs. 20-00 or $ 4-00

PRINTED IN INDIA BY P. M. KURUVILLA AT WESLEY PRESS, MYSORE

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FOREWORD

The Central Institute of Indian Languages was set up on the 17th July 1969 with a view to assisting and coordinating the development of Indian Languages. The Institute was charged with the responsibility of serving as a nucleus to bring together all the research and literary out-put from the various linguistic streams to a common head and narrowing the gap between basic research and developmental research in the fields of languages and linguistics in India.

The Institute and its four regional centres are thus engaged in research and teaching which leads to the publication of a wide-ranging variety of materials. Material designed for teaching/learning at different levels and suited to specific needs is one of the major areas of interest in its series of publication. Basic research relating to the acquisition of language in its manifold psycho-social relations constitute another broad range of its interest. These materials will include materials produced by the members of the staff of the CIIL and its regional centres and associated scholars from universities and institutions both Indian and foreign.

D. P. PATTANAYAK

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EDITOR'S NOTE

The Summer School of Linguistics, 1970, was held in Mysore City under the joint auspices of the Linguistic Society of India, University of Mysore and Central Institute of Indian Languages, with generous financial assistance from the University Grants Commission.

During the School, a two-day seminar was organised and the registrants, the faculty members and members of the staff of CIIL were invited to present their papers. Most of the papers in this volume were thus presented in this seminar. The emphasis was on India as a Linguistic area with the aim of identifying Regional Universals of Indian languages which include four important language families of the world. Most of these papers on Regional Universals concentrated on a single category of grammar, namely 'Negation', and tried to describe it in terms of its form, function and process as found in several Indian languages. The paper on Sindhi Negation by Dr. Khubchandani which was not presented in the seminar is also included here because of its relevance to the subject matter under investigation. A few other papers had language families as scope for their study. It was hoped that a beginning like this would encourage Indian linguists to study systematically the Regional Universals of Indian languages. The theoretical model of description to be followed was left to the choice of participating scholars and thus this has resulted in the application of several currently available models to the aspects of Negation in Indian languages.

The basic theoretic and methodological issues involved in the investigation of language universals are manifold. A systematic treatment of these issues is available in *Universals of Language* edited by J. H. Greenberg. This volume is based more or less on the dictum of Bloomfield in his classic *Language* that 'the only useful generalizations about language are inductive generalizations'. A different approach is available in Chomsky's *Aspects of the Theory of Syntax* (and repeated elsewhere) which proposes to divide linguistic universals into two categories namely formal universals that determine the structure of grammars and the form and organization of rules, and substantive universals that define the sets of elements that may figure in particular grammars. Though these approaches were noted in the discussion which ensued after the presentation of papers on Negation, the papers presented in the seminar aimed mostly at providing data which could be profitably used at a later stage for arriving at generalizations about universals of Indian languages on a regional basis.

The second set of papers were presented in the seminar by the registrants. These ranged from the study of historical inscriptions to

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dialectal studies and reflected in a general way the areas of interests of the registrants.

A notable feature of the School was the series of lectures delivered by several visiting scholars. These scholars were requested to send a formal version of their lectures later on, and papers of those who responded to this request are also included in this volume.

We are grateful to the University Grants Commission for their generous financial assistance to the Summer School, which originally did not envisage the publication of a volume like this. Subsequently the UGC extended financial assistance for the publication of this volume and we are grateful to the UGC for this kind gesture.

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Section I

PAPERS ON NEGATION

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NEGATION IN KANNADA

K. S. GURUBASAVE GOWDA

(*C.I.I.L., Mysore*)

THERE are two types of negative elements in Kannada: those that are free and those that are bound. Free forms can be further sub-divided into two sub-classes. The first contains the two elements *alla* and *illa*, and the second contains *bēḍa*.

All these free forms are further segmentable. But this paper is not as much interested in their internal structure as in their external distribution.

All these free forms except one do not show any distinction between person, number and gender.

Elements *alla* and *illa* may be taken first. *alla* negates the equation of two things and *illa* negates existence. Using the Sanskrit terms one may say roughly that *alla* is *tadbhinnārthaka* and *illa* is *abhāvārthaka*.

The following examples will make the distinction clear.

adu katte 'that is an ass'
adu katteyalla 'that is not an ass'
avanu hucca 'he is a mad man'
avanu huccanalla 'he is not a mad man'

These examples show that *alla* is used to negate non-verbal sentences.

As mentioned before *illa* negates existence. The verb *iru* 'to be' in Kannada, unlike other verbs, shows two paradigms in the non-past; one paradigm indicates certainty and the other indicates habitual. For example:

ā huttadalli hāvu iruttade
'usually there will be a snake in that ant-hill'

hāvu ā huttadallide
'there is a snake right now in that ant-hill'

The negative of the non-past habitual forms is formed by adding *illa* to the verbal noun form from the root *iru* 'to be'.

Example:

ā huttadalli hāvu iruvudilla
'snakes are not usually found in that ant-hill'

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In this *iruvud(u)* is the verbal noun and *illa* is the negative element.

The negative of non-past certain forms is obtained by using *illa* instead of corresponding affirmative forms.

Examples:

ā huttadalli hāvilla
'there is no snake in that ant-hill'

The negative of the non-past forms of the other roots is formed in the same way as the negative of the non-past habitual forms of *iru* 'to be'. Example:

avanu kelasavannu sariyāgi māḍuvudilla
'he will not do the job properly'
'he does not do the job properly'

Here *māḍuvud(u)* is the verbal noun and *illa* is the negative element.

The negative of the past forms is formed by adding *illa* to the infinitive form of the verbal root.

Examples:

avanu maneyalli iddanu
'he was in the house'

avanu maneyalli iralilla
'he was not in the house'

avaḷu ā kelasavannu māḍidaḷu
'she did that job'

avaḷu ā kelasavannu māḍalilla
'she did not do that job'

In these examples *iral(u)* and *māḍal(u)* are the infinitives and *illa* is the negative element. It has to be noted that the negative form does not contain any morpheme indicating past tense. The whole construction may be said to have the past negative meaning.

Whereas *illa* and *alla* may be said to negate indicative sentences, *bēḍa* negates imperative sentences. *bēḍa* is the exact opposite of *bēku* 'want'.

Examples:

nanage kāfi bēku
'to me coffee is wanted',
'I want coffee'
nanage kāfi bēḍa
'to me coffee is not wanted,'
'I do not want coffee'

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bēḍa can also be used with infinitives to prohibit any action:

tinna bēḍa 'do not eat'
kuḍiya bēḍa 'do not drink'
malaga bēḍa 'do not sleep'

It has to be noted that *bēḍa* when used like this is restricted only to second person singular, where as in the other case there is no such restriction. There is also another form *bēḍi~bēḍri* used in the plural or in polite singular:

nimage innondu iḍli baḍisale? bēḍi,
'shall (I) put one more idli to you?' 'No'
ninage ēnu bēku? 'what do you want?'
nanage ēnū bēḍi 'I do not want anything'

There are two more elements *bāradu* and *kūḍadu* which are used with the infinitives of the verbs. There is no distinction of person, number and gender when these forms are used.

avanu/avaḷu/adu/avaru/etc., ī kelasavannu māḍabāradu
'he/she/it/they should not do this job'
nīnu/nīvu/etc., ā kelasavannu māḍa kūḍadu
'you (sg)/you (pl) should not do that job'

Here *kūḍadu* is more emphatic than *bāradu*.

It was mentioned in the beginning of this paper that there are negative elements which are bound. They are two in number: (*i*)-*ade* and (*ii*)-*ada*. -*ade* and -*ada* are added to roots and their use may be illustrated from the following examples.

avanu kelasavannu mugisi bandanu
'having done the job he came'
avanu kelasavannu mugisade bandanu
'not having done the job he came'
(he came without doing the job)
avanu ā kelasavannu mugisi baruttāne
'having finished that job he will come'
(he will come after finishing the job)
avanu ā kelasavannu mugisade baruvudilla
'he will not come without finishing that job'

The other bound element is -*ada*. This may be called negative participle.

mugisida kelasa 'finished job'
mugisada kelasa 'un-finished job'

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hoḍeda manuśya 'the man who beat'
hoḍeyada manuśya 'the man who did not beat'

All these remarks refer to the most commonly used expressions in written Kannada. If we take proverbs also into consideration, we will have to say that negative forms show distinction of person, number and gender. These are not treated in this paper.

Before ending this paper I have to mention two more forms *paravāgilla ~paravāyilla* and *tiḷiyadu*. The former form means 'it does not matter, it's all right' and 'it's not bad' etc., and it contains the negative element *illa*. It is difficult to assign any meaning to *paravāg ~ paravāy*. The latter form either overtly or covertly needs dative noun in the sentence. The form *tiḷiyadu* means 'not known' or 'unknown', which always agrees with neuter singular subjects.

nanage adu tiḷiyadu
'to me it is not known' (I do not know)

nanage avaḷu yāru embudu tiḷiyadu
'to me it is not known who she is.'

(My thanks are due to H. S. Biligiri for his comments and encouragement in writing this article.)

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NEGATION IN MALAYALAM

N. RAVINDRAN

(*C.I.I.L., Mysore*)

1. All languages have a system of negation as opposed to affirmation. As is obvious negation is opposite to affirmation. The following is an effort to describe the ways in which negation is carried out in Malayalam.

2. Negative markers are of two types—free forms and bound forms. Bound forms are affixes bound to verbs. Free forms can either occur in isolation or as words in a sentence.

3. Free markers

The commonest free negative markers are *alla* and *illa*. Their use is clearly demarcated.

3.1. Negation of Identification

The free form *alla* is used to negate identification. For instance,

itu maram 'this is a tree'
itu maram alla 'This is not a tree'
atu pāra 'That is a rock'
atu pāra alla 'That is not rock'
avan kaḷḷan āṇu 'He is a thief'
avan kaḷḷan alla 'He is not a thief'
avaḷ ayāḷuṭe bhārya āṇu 'She is his wife'
avaḷ ayāḷuṭe bhārya alla 'She is not his wife'

3.2. Negation of Existence

To negate existence, the free form *illa* is used. For instance,

ayāḷ aviṭe uṇṭu. 'He is there'.
ayāḷ aviṭe illa. 'He is not there'.
vīṭṭil ellāvarum uṇṭu. 'Everybody is at home'.
vīṭṭil ellāvarum illa. 'Everybody is not at home'.
enṭe kayyil paṇam uṇṭu. 'I have money'.
enṭe kayyil paṇam illa. 'I have no money'.

3.2.1. In the following examples *illa* occurs as a part of verb. It is affixed to verbs after the tense marker. For instance,

avaḷ vaṉṉu. 'She came'.
avaḷ vaṉṉilla. 'She did not come'.
maḻa peytu 'It rained'
maḻa peytilla 'It did not rain'
avan pōyi 'He went'

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avan pōyilla 'He did not go'
ñān atu ceytu 'I did that'
ñān atu ceytilla 'I did not do that'

4. Bound forms

Bound negative markers are affixed to verb roots.

4.1. -āte

The negative affix *-āte* is added to verb stems. For instance,

varāte 'without coming'
avaḷ iviṭe varāte pōyi 'She went without coming here'
pōkāte 'without going'
kāṇāte 'without seeing'
ceyyāte 'without doing'
ōṭāte 'without running'

4.2. -ā

The affix *-ā* is another negative marker. This is limited to only a few verb roots. By adding this marker to verb roots we get a kind of negative attributes. For instance,

vayyā 'not able'
enikku vayyā 'I am unable'
vayyā veeli 'unwanted botherations'
pōrā 'not sufficient'
itrayum pōrā 'This much is not sufficient'
tīrā 'not ending'
tirā vēdana 'unending pain'
tōrā 'not stopping'
tōrā maḻa 'unending rain'

5. -ṭa (vēṇṭa)

The negative marker *-ṭa* is added to the root *vēṇ-* meaning 'needed'. Thus, *vēṇṭa* means 'not needed'. *vēṇṭa* can occur independently. For instance,

itu vēṇō? '(Do you) need this?'
vēṇṭa 'Not needed'
entu vēṇam? 'What do (you) want?
oṉṉum vēṇṭa 'Nothing is needed'

vēṇṭa is added to infinitives to get *Negative Imperatives*. For instance,

varavēṇam/varaṇam 'Come'.
varavēṇṭa/varaṇṭa 'Do not come'
pōkavēṇam/pōkaṇam 'Go'
pōkavēṇṭa/pokaṇṭa 'Do not go'.
ōṭavēṇam/ōṭaṇam 'Run'.
ōṭavēṇṭa/ōṭaṇṭa 'Do not run'.

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6. Two peculiar forms

The negative suffix *-āte* is affixed to the negative free forms *alla* and *illa* forming two peculiar negative forms *allāte* and *illāte*.

allāte 'without that'
'without which'
'without who'

illāte 'having not'

atallāte entu vaḻi?
'without that what is the way?'

paṇam illāte entu ceyyum?
'what will one do without money?'

7. Sanskrit Negatives

There is a large number of lexical items borrowed from Sanskrit. Many of these can be paired off and certain negative prefixes can be segmented. Some of them are listed here. For instance,

7.1. a- and an-

The negative prefix *a-* occurs before consonant-beginning words, e.g.,

pūrvam 'seen before'
apūrvam 'not seen before'
sādhyam 'possible'
asādhyam 'impossible'
sādhāraṇam 'common'
asādhāraṇam 'uncommon'
vivāhitan 'married man'
avivāhitan 'unmarried man'

The negative prefix *an-* occurs before vowel-beginning words, e.g.,

āvaśyam 'necessary'
anāvaśyam 'unnecessary'
ēkam 'one'
anēkam 'not one' 'many'

7.2. niC—

where C=s if the following sound is *s* or *t*.

e.g.,

ṉissahāyata 'helplessness'
ṉistāryam 'not surpassable'

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C=ś if the following is č or ś e.g.,

ṉiśčalam 'not moving'
ṉiśśēṣam 'without residue'

C=r if the following is a vowel or a voiced consonant.

e.g.,

ṉirāhāram 'no food'
nirdōṣam 'no harm'

where C=ṣ if the following is a voiceless consonant except ś, č. *s* and *t*.

e.g.,

ṉiṣkāmam 'without sexual desire'
ṉiṣkaruṇam 'without kindness'
ṉiṣprabham 'without shining'.

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NEGATION IN TAMIL

K. RANGAN

(*C.I.I.L., Mysore*)

1.1 THE purpose of this paper* is to describe the formation of negation in Tamil applying transformational methodology (Chomsky: 1965). The morpheme *Neg* is generated when *S*(*entence*) is rewritten. It is neither a part of verb phrase nor noun phrase. Like the morpheme *Q*, *Neg* is also posited to trigger the transformational rules to derive negative sentences. A fragment of rewrite rules is given below:

(1) S → (Imp) (Neg) NP PDP

(2) PDP → (Time) (Place) VP AUX

(3) VP → $\left\{\begin{array}{l}\text{Pred iru} \\ \left\{\begin{array}{l}\text{(PP) (PP) (MP) V} \\ \text{Pred V}\end{array}\right\}\end{array}\right\}$

(4) AUX → (Aspect) Tn Pt

(5) Aspect → (Refl ppl) (Compl ppl) (Prog ppl) (Perf ppl)

(6) Tn → $\left\{\begin{array}{l}\text{Fut} \\ \text{Non-Fut}\end{array}\right\}$

(7) Non-Fut → $\left\{\begin{array}{l}\text{Past} \\ \text{Present}\end{array}\right\}$

In simple finite verbs, the transformational rule changes the position of the *Neg* morpheme from its original place i.e., it brings *Neg* under the immediate domination of *Aux* replacing the *Tn* and *Pt* when *Tn* is realized as *Non-Fut*. A set of deletion rules deletes *Tn* and *Pt*. Diagrams (1) and (2) show the changes that are due to transformation when *Tn* is realized as *Non-Fut*.

In Tamil we have sentences like

(1) *avan neettu viiṭṭukku varale*
'he yesterday house-to came-not'

* I am very thankful to my professor P. B. Pandit, C. J. Daswani, University of Delhi, and K. S. Ramasubramaniam, Annamalai University for their comments and criticism which improved both the content and expression of this paper.

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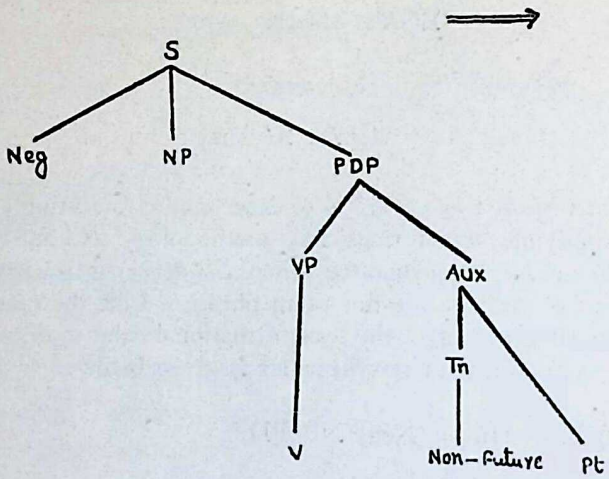

FIG. 1

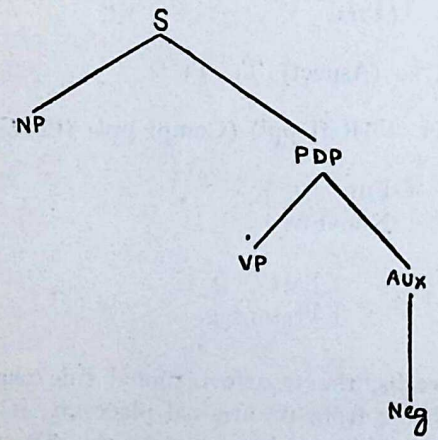

FIG. 2

(2) *ammaa iṇṇekki cinimaavukku pookale*
'mother today movie-to go-not'

(3) *vaattiyaar paaḍam naḍattale*
'teacher lesson taught-not'

The corresponding underlying forms with the postulation of *Neg* morpheme are

(1A) *avan neettu viiṭṭukku vandaan*
'He came to the house yesterday'

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(2A) *ammaa iṉṉekki cinimaavukku pooraangaḷ*
'The mother goes to a movie today'

(3A) *vaattiyaar paaḍam naḍattinaar*
'The teacher taught the lesson'

The infinitive transformation is here applied before *Neg* is brought under *Aux*. This rule attaches the morpheme *Inf* which is later realized as *-a* in the phonological component. Diagrams (3) and (4) represent graphically the deep structures of (1) and (3).

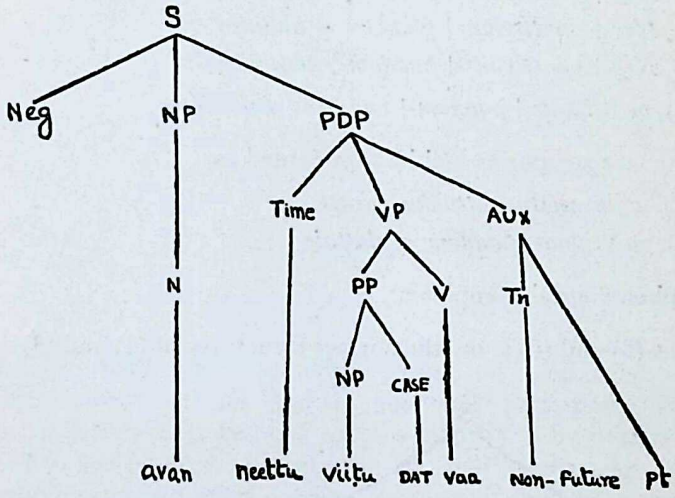

FIG. 3

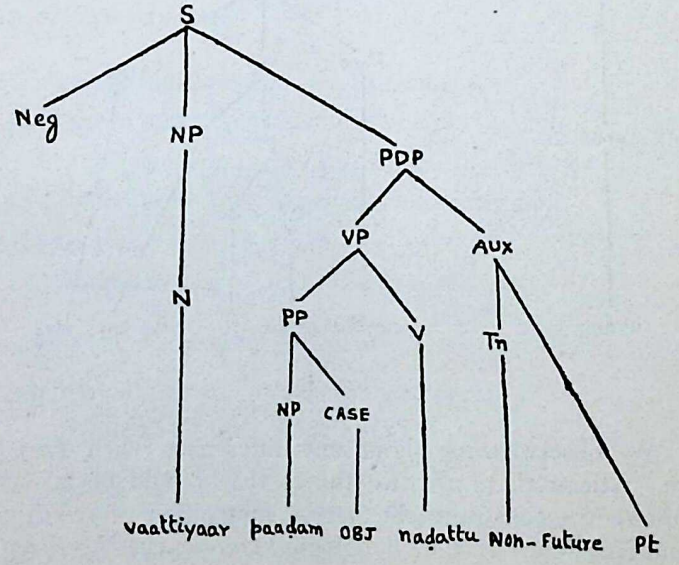

FIG. 4

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The various operations performed with the help of transformational rules can be shown as

Neg+avan+neettu+viiṭṭukku+vaa+Non-Fut+Pt →
Neg+avan+neettu+viiṭṭukku+vaa+Pt →
Neg+avan+neettu+viiṭṭukku+vaa →
Neg+avan+neettu+viiṭṭukku+vaa+Inf →

(1) *avan+neettu+viiṭṭukku+vaa+Inf+Neg*

Neg+vaattiyaar+paaḍam+naḍattu+Non+Fut+Pt →
Neg+vaattiyaar+paaḍam+naḍattu+Pt →
Neg+vaattiyaar+paaḍam +naḍattu →
Neg+vaattiyaar+paaḍam+naḍattu+Inf →

(3) *vaattiyaar+paaḍam+naḍattu+Inf+Neg*

These surface structures will be represented as

(1) *avan neettu viiṭṭukku varale*
(3) *vaattiyaar paaḍam naḍattale*

in the phonological component.

Diagrams (5) and (6) show the surface structures of (1) and (3)

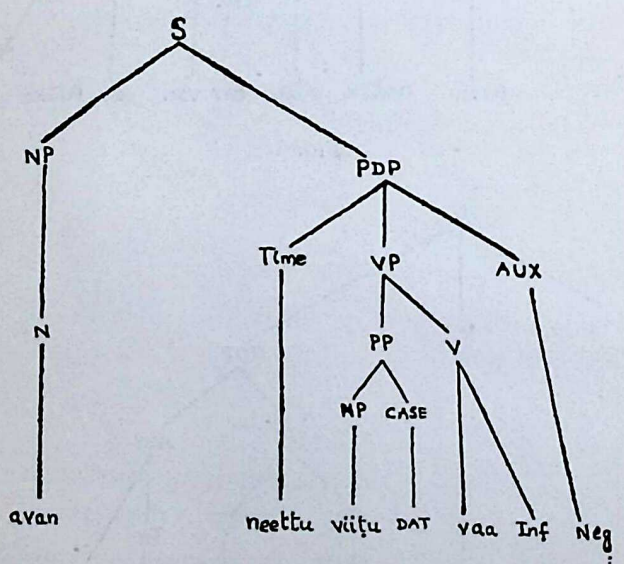

FIG. 5

1.2 We observe some significant differences when *Tn* is realized as future. Atleast there are two things that should be taken note of. These differences constitute the partial motivation of rewriting *Tn* as *Future* and *Non-Fut.* In the phonological component *Neg* is represented as *le* when *Tn* is *Non-Future.* The deletion rules delete both the tense

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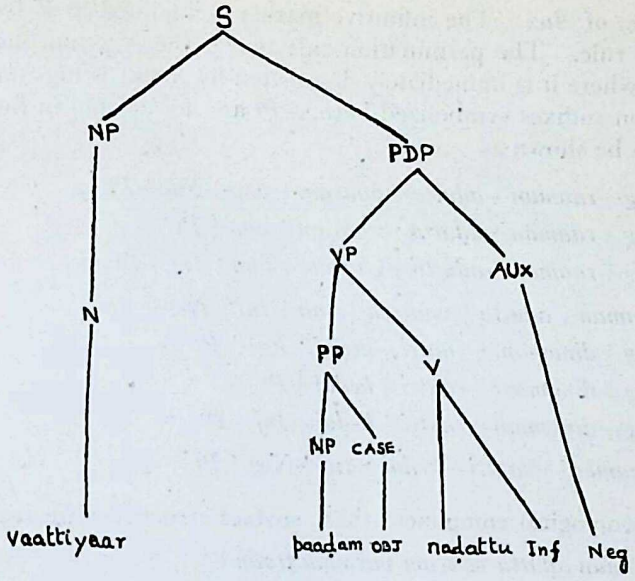

FIG. 6

and personal suffixes. But when *Tn* is future, only the tense is deleted and not *Pt*. The morpheme *Neg* is phonetically represented as *maaṭṭu* when the subject *NP* is specified as (+human). Otherwise it will be *-aa* i.e., when the *NP* is (-human), the *Neg* will be represented as *-aa*. The infinitive transformation operates here also. It implies that if this rule fails to operate, the resultant string will be ungrammatical. Examples (4) and (6) can be taken to illustrate the various processes involved to derive the surface structure.

(4) *raaman aḍutta vaaraam varamaaṭṭaan*
'Raman next week come—will not'

(5) *cucilaa naaḷekki peepar paḍikkamaaṭṭaaḷ*
'Susila tomorrow a paper read—will not'

(6) *dinamaṇi raatri keḍaikkaadu*
'Dinamani night be available—will not'

The corresponding underlying forms are

(4A) *raaman aḍutta vaaram varuvaan*
'Raman will come next week'

(5A) *cucilaa naaḷekki peepar paḍippaaḷ*
'Susila will read a paper tomorrow'

(6A) *dinamaṇi raatri keḍaikkum*
'Dinamani will be available tonight'

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First, the deletion rule deletes the *Future* which is under the immediate domination of *Aux*. The infinitive marker is adjoined to *V* by a transformation rule. The permutation rule moves the *Neg* morpheme from the place where it is immediately dominated by *S* and brings under *Aux*. The person suffixes symbolized here as *Pt* are not deleted in these cases. These can be shown as

Neg+*raaman*+*aḍutta*+*vaaram*+*vaa*+*Fut*+*Pt* →
Neg+*raaman*+*aḍutta*+*vaaram*+*vaa*+*Pt* →
Neg+*raaman*+*aḍutta*+*vaaram*+*vaa*+*Inf*+*Pt* →

(4) *raaman*+*aḍutta*+*vaaram*+*vaa*+*Inf*+*Neg*+*Pt*
Neg+*dinamaṇi*+*raatri*+*keḍai*+*Fut*+*Pt* →
Neg+*dinamaṇi*+*raatri*+*keḍai*+*Pt* →
Neg+*dinamaṇi*+*raatri*+*keḍai*+*Inf*+*Pt* →

(6) *dinamaṇi*+*raatri*+*keḍai*+*Inf*+*Neg*+*Pt*

In the phonological component these surface structures are realized as

(4) *raaman aḍutta vaaram varamaaṭṭaan*
(6) *dinamaṇi raatri keḍaikkaadu*

Diagrams (7) and (8) which represent these surface structures are given to compare with those of (5) and (6) so that we can get a clear picture of the negative formation in Tamil.

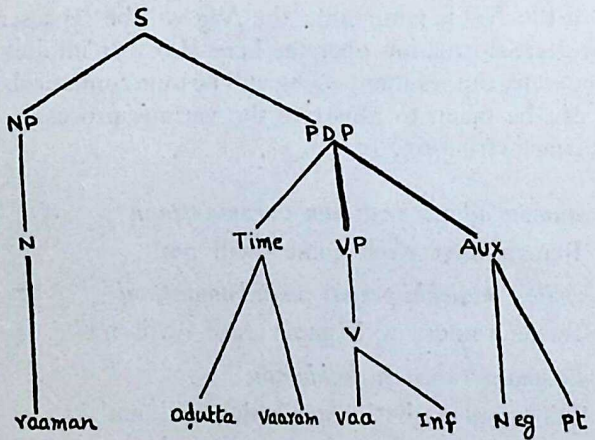

FIG. 7

1.3 When the complex verb is present in a sentence, there is no significant difference in the operation of transformational rules from those we have examined earlier. The same rules operate here also depending on the realization of *Tn*. When verbs such as

(7) *vandirukkaan* 'has come'.
(8) *vara veeṇum* 'should come'.

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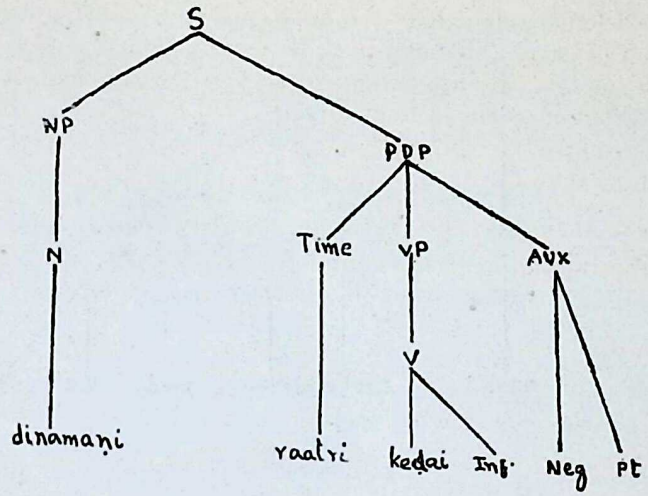

FIG. 8

(9) *pooka muḍiyum* 'can go'.
(10) *paḍiccirukka veeṇum* 'should have read'.

occur, the *Tn* alone is deleted and the morpheme *Neg* is inserted in this place. The person suffix is deleted when *Tn* is *Non-Future.* Let us take some examples of complex verbs to understand the various processes of negative formation.

(11) *avan naaḷekki vara muḍiyaadu*
'he tomorrow come can not'
(12) *tambi paṇam koḍukka veeṇaam*
'younger brother money give need not'
(13) *kandan cinimaavukku pooyirukkale*
'Kandan movie-to gone has not'

The deep structures of (11-13) with *Neg* morpheme would be

(11A) *avan naaḷekki varamuḍiyum*
'He can come tomorrow'
(12A) *tambi paṇam koḍukka veeṇum*
'The younger brother should give money'
(13A) *kandan cinimaavukku pooyirukkaan*
'Kandan has gone to a movie'

Examples (11) and (13) can be taken up here to explain the formation of negation when the verbs are complex. Diagrams (9) and (10) represent the deep structures of (11) and (13).

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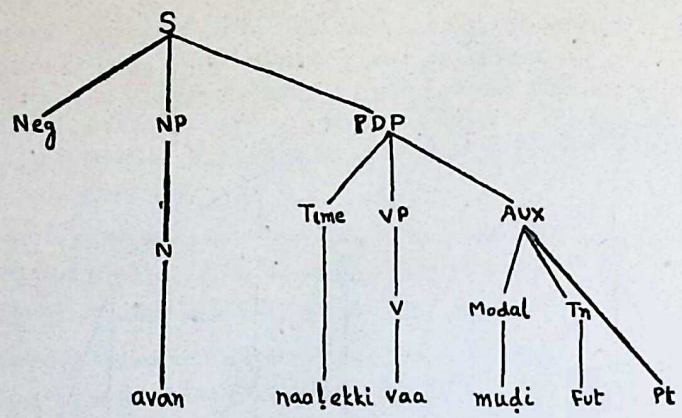

FIG. 9

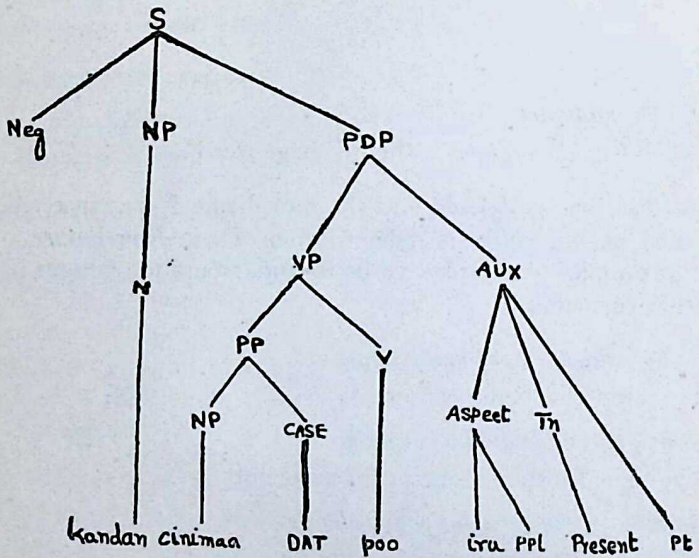

FIG. 10

Neg+avan+naaḷekki+vaa+muḍi+Fut+Pt →
Neg+avan+naaḷekki+vaa+muḍi+Pt →
Neg+avan+naaḷekki+vaa+Inf+muḍi+Pt →
avan+naaḷekki+vaa+Inf+muḍi+Neg+Pt

This surface structure will be represented as

avan naaḷekki vara muḍiyaadu

in the phonological component.

Neg+kandan+cinimaavukku+poo+iru+PPl+Present+Pt →
Neg+kandan+cinimaavukku+poo+PPl+iru+Present+Pt →

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Neg+kandan+cinimaavukku+poo+PPl+iru+Pt →
Neg+kandan+cinimaavukku+poo+PPl+iru →
Neg+kandan+cinimaavukku+poo+PPl+iru+Inf →
kandan+cinimaavukku+poo+PPl+iru+Inf+Neg

The phonetic representation of this surface structure is

kandan cinimaavukku pooyirukkale

1.4 We have to explain the formation of negation when the sentences are imperatives. Since the behaviour of these sentences differ to a considerable extent from the declarative sentences, we have to keep these sentences as distinct and explain the various rules involved in the derivation of the surface structure. The *S* has been rewritten as

(1) S → (Imp) (Neg) NP PDP

When the morpheme *Imp* is present, the *NP* which is immediately dominated by *S* will be second person pronoun i.e., the *NP* which functions as the subject of the sentence will be specified as (+PRO), (+Participant) and (-Speaker). The *Tn* will be realized as future at the deeper level. At the surface level, the *Tn* is deleted (Katz & Postal: 1964). The *Tn* is always realized as *Future* because of the presence of *Imp* morpheme. So the question of *Tn* being realized as *Non-Future* doesn't arise in this context. The morpheme *Neg* is represented phonetically as *maaṭṭu* in other cases when *Tn* is future. But when *Imp* is present, it is phonetically represented as *-aad*. The other difference that we find in these cases is the absence of infinitive transformation i.e., the infinitive transformation doesn't operate when *Imp* is generated. Only deletion and permutation rules are needed here.

We can take up the following examples to illustrate.

DECLARATIVE-NEGATIVE

(14) *nii aḍutte varusam paḍikkamaaṭṭe*
'you next year study will not'

(14A) *nii aḍutte varusam paḍippe*
'you will study next year'

(15) *nii ammaave aḍutte vaaram paakkamaaṭṭe*
'you mother next week see will not'

(15A) *nii ammaave aḍutte vaaram paappe*
'you will see the mother next week'

IMPERATIVE-NEGATIVE

(16) *(nii) inge varaade*
'(you) here come not'

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(16A) (*nii*) *inge vaa*
'(you) come here'

(17) (*nii*) *naaḷekki viiṭṭukku pookaade*
'(you) tomorrow house—to go not'

(17A) (*nii*) *naaḷekki viiṭṭukku poo*
'(you) go to the house tomorrow'

(18) (*niingaḷ*) *canikkiḻame paḍikkaadingaḷ*
'(you) Saturday read not'

(18A) (*niingaḷ*) *canikkiḻame paḍingaḷ*
'(you) read on Saturday'

Sentences (16), (17) and (18) are represented differently in the phonological component from those of (14) and (15). Both the rules involved here and the realization of *Neg* morpheme are different. This is mainly due to the morpheme *Imp*. We can now explain how sentences (16) and (18) are derived from the respective underlying structures. The deep structure of (16) is

Imp+*Neg*+*nii*+*inge*+*vaa*+*Fut*+*Pt*

This can be represented as

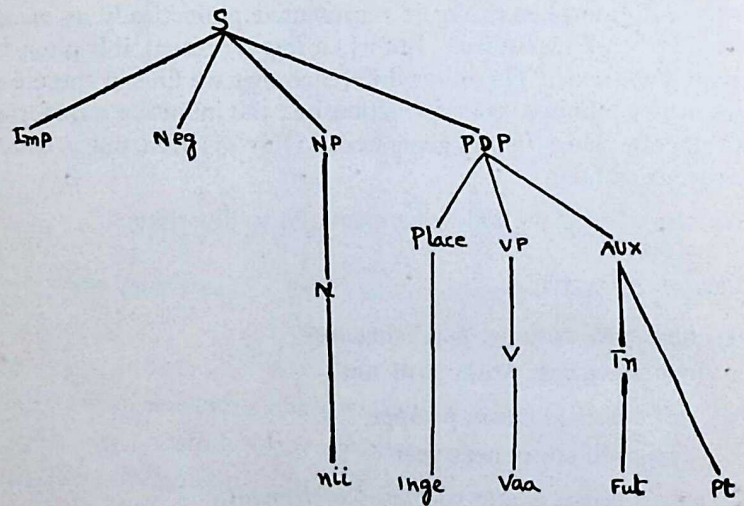

FIG. 11

The following operations are being performed to derive the surface structure.

(*i*) the *Tn* which is Future is deleted

(*ii*) the morpheme *Neg* is brought under *Aux*.

(*iii*) the deletion rules delete both *Imp* and the subject *NP*. i.e., the second person pronoun *nii* and *niingaḷ*.

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In the phonological component *Neg* is phonetically realized as *aad*

Imp+Neg+nii+inge+vaa+Fut+Pt →
Imp+Neg+nii+inge+vaa+Pt →
Imp+nii+inge+vaa+Neg+Pt →
nii+inge+vaa+Neg+Pt

This will be

nii inge varaade

The subject *NP nii* can be deleted optionally in order to get

inge varaade

Except the rule which deletes *nii* all the other rules are obligatony i.e., rules which are deleting *Tn* and *Imp* and the rule which brings *Neg* under *Aux* are applied obligatorily in order to derive the grammatical strings. Diagram (12) shows the surface structure of (16).

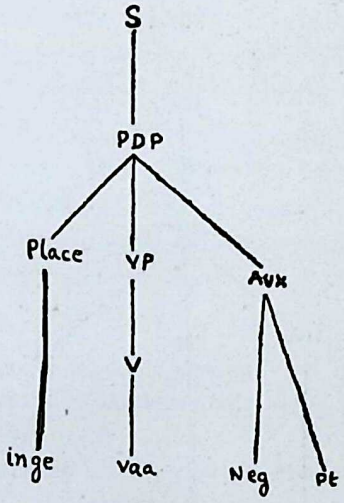

FIG. 12

The same rules described earlier are applied in getting the sentence (18). Diagrams (13) and (14) are given for explaining the difference between deep and surface structures.

Imp+Neg+niingaḷ+canikkiḻame+paḍi+Future+Pt →
Imp+Neg+niingaḷ+canikkiḻame+paḍi+Pt →
Imp+niingaḷ+canikkiḻame+paḍi+Neg+Pt →
niingaḷ+canikkiḻame+paḍi+Neg+Pt →
canikkiḻame+paḍi+Neg+Pt

This will be converted into

canikkiḻame paḍikkaadingal

in the phonological component.

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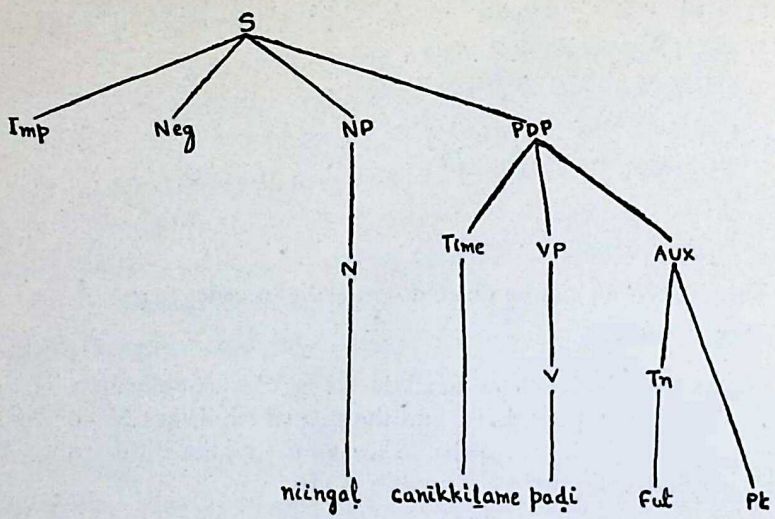

FIG. 13

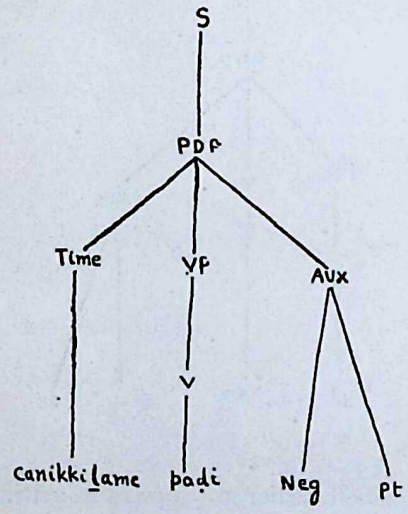

FIG. 14

Bibliography

Chomsky, N. (1957) *Syntactic Structures*, Mouton & Co., The Hague.

Chomsky, N. (1965) *Aspects of the theory of Syntax*, MIT Press: Cambridge.

Katz and Postal, P. M. (1964) *An Integrated Theory of Linguistic Descriptions*, MIT Press: Cambridge.

Klima, Edward (1964) 'Negation in English' in Katz and Fodor (eds) *The Structure of Language*.

Rangan, K., *A Contrastive Analysis of the Grammatical structures of Tamil and English* (in progress) Ph.D., diss. Univ. of Delhi, Delhi-7.

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NEGATION IN TELUGU

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IN THIS paper, an attempt is made to present a preliminary analysis of Negation in Telugu. The paper does not go into all the details of the topic but provides a general picture of Negation in Telugu.

There are the following negative verbs in Telugu and a suffix (neg): *lē-* and *kā-* followed by person/number/gender marker, *vaddu*, *kūḍadu* and the suffix *-a*. The third and fourth are not mono-morphemic; their internal structure is not described as it does not suitably fit into the present discussion in this paper.

The two negative words *vaddu* and *kūḍadu* do not exhibit any distinction with regard to person, number and gender.

Out of the above negative verbs *kā-* negates the equational sentences whereas *lē-* negates the existence. For example:

(1) *āme manci ṭīcaru* 'She is a good teacher'.
(1a) *āme manci ṭīcaru kādu* 'She is not a good teacher'.
(2) *adi manci pustakam* 'That is a good book'.
(2a) *adi manci pustakam kādu* 'That is not a good book'.
(3) *vāḍu manci vidyārthi* 'He is a good student'.
(3a) *vāḍu manci vidyārthi kādu* 'He is not a good student'.

From the above examples, it is obvious that the negative verb root '*kā-*' occurs in the case of equational sentences. In other words, '*kā-*' negates the non-verbal sentences.

As has been mentioned above, the negative verb root '*lē-*' negates existence.

Consider the following examples:

(4) *pustakam balla mīda undi* '(The) book is on the table'.
(4a) *pustakam balla mīda lēdu* '(The) book is not on the table'.
(5) *rāmuḍu baḷḷō unnāḍu* 'Rama is in school'.
(5a) *rāmuḍu baḷḷo lēḍu* 'Rama is not in school'.
(6) *sīta inṭlo undi* 'Sita is at home'.
(6a) *sīta inṭlo lēdu* 'Sita is not at home'.

The examples 4 to 6a show that '*lē-*' negates existence.

The verb 'to be' (*unḍ-*) exhibits two different paradigms in the present: (1) certainty and (2) habitual. Consider the following examples:

(7) *vāḍu ī ṭaymuku baḍilō unṭāḍu*
'He is (usually) in school at this time'—*Habitual*

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(8) *vāḍu ippuḍu baḍilō unnāḍu*
'He is in school now'—*Certainty*

Here in the case of the habitual negative, the suffix *-a* occurs as negative marker. For example:

(7) *vāḍu ī ṭaymuku baḍilō unṭāḍu*
'He is (usually) in school at this time'

(7a) *vāḍu ī ṭaymuku baḍilō unṭaḍu*
'He is (usually) not in school at this time'

In the case of habituals, the negative suffix *-a* is added to the verb 'to be' (*unḍ-*) whereas in the case of certainty, the whole verb 'to be' (*unḍ-*) is replaced by the negative element *lē-*. Consider

(8) *vāḍu ippuḍu baḍilō unnāḍu*
'He is in school now'

(8a) *vāḍu ippuḍu baḍilō leḍu*
'He is not in school now'

In the case of all other verbs in the non-past forms, the negative suffix *-a* occurs as in the case of habitual form of 'to be'. Consider the following examples:

(9) *naukaru pani pūrti cestāḍu*
'The peon does his work completely'

(9a) *naukaru pani pūrti ceyyaḍu*
'The peon doesn't do his work completely'

In the case of negative in the past forms, the neg. element '*lē-*' is added to the infinitive form of the verb followed by the number, person and gender marker: For example,

(10) *naukaru pani pūrti cesæḍu*
'The peon did his work completely'

(10a) *naukaru pani pūrti ceyyalēdu*
'The peon didn't do his work completely'

(11) *lakṣmi annam tindi*
'Lakshmi ate her food'

(11a) *lakṣmi annam tinalēdu*
'Lakshmi didn't eat her food'

In examples 10a and 11a, we see that the negative element *lē-* is added to the infinitive forms of the verbs *cēs-* (do) and *tin-* (eat). It may be mentioned here that this negative element doesn't contain any tense marker. Thus it negates the whole sentence. But *lēdu*, *kādu* may

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be said to negate indicative constructions and *vaddu* and *kūḍadu* occur in the case of negative formations of verbs ending in *-āli*. Consider

(12) *nāku ḍabbu kāvāli* 'I want money'.
(12a) *nāku ḍabbu vaddu* 'I don't want money'.
(13) *ā pani ceyyāli* 'That work should be done'.
(13a) *ā pani ceyya kūḍadu* 'That work should not be done'.

vaddu can also be used as prohibitive in the case of imperatives. In the case of plural or polite constructions also, this holds good and in addition the plural/polite marker '*-aṇḍi*' is added to this. Consider

(14) (*mīru*) *kāfi tāgaṇḍi* '(You) (hon/pl) drink coffee'.
(14a) (*mīru*) *kāfi tāgakaṇḍi*
'(You) (hon/pl) don't drink coffee'.

It may be mentioned here that the prohibitive marker '*kūḍadu*' does not exhibit any changes in its shape irrespective of the number, person or gender. Consider the following:

(15) *nēnu cadawa kūḍadu* 'I should not read'.
(16) *nīwu cadawa kūḍadu* 'You (sing) should not read'
(17) *mīru cadawa kūḍadu* 'You (pl/hon) should not read'.
(18) *vāḍu cadawa kūḍadu* 'He should not read'.
(19) *āme cadawa kūḍadu* 'She should not read'.
(20) *wāḷḷu cadawa kūḍadu* 'They should not read'.

In old written Telugu, '*rādu*' is used instead of *kūḍadu;* but the former is no more retained in modern written Telugu.

The negative markers in Telugu and their distribution may be summarised as follows:

**lē-* Negative marker in the case of verb 'to be' (*uṇḍ-*)
†kā- Negative marker in the case of verb 'to become' (*aw-*)
vaddu Negative marker in the case of verbs ending in *-āli* suffix.
kūḍadu Prohibitive.
-a Negative marker added to the verb root before the person/number/gender marker.

* '*vac*' and '*rā*' are allomorphs of the same morpheme and the occurrences of these depend upon the following elements, i.e., '*rā*', occurs when followed by a negative marker and in imperatives and gerundives and '*vac*' elsewhere.

† '*kā*' and '*aw*' are allomorphs of the same morpheme and their occurrences also depend upon the following elements, i.e., '*kā*' occurs when followed by a negative marker and '*aw*' elsewhere.

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In addition to the above, there is another negative marker *-akaṇḍā* in Telugu which is added to the root which is followed by a finite verb. For example:

(21) *lakṣmi pālu tāgi nidrapōyindi* 'Lakshmi slept after drinking milk'.

(21a) *lakṣmi pālu tāgakaṇḍa nidrapōyindi* 'Lakshmi slept without drinking milk'.

(22) *rāmuḍu annam tini caduwukuṇṭunnāḍu* 'Rama is reading after eating food'.

(22a) *rāmuḍu annam tinakaṇḍā caduwukuṇṭunnāḍu* 'Rama is reading without eating food'.

There is an exception. That is, in the case of the verb 'to know' (*teliyu*), the negative is marked by a suffix '*-adu*'. The occurrence of this marker is restricted to the verb 'know' (*teliyu*) only. Consider:

(23) *nāku āwiḍa telusu* 'I know her'.

(24) *nāku āwiḍa teliyadu* 'I don't know her'.

Bibliography

Arden, A. H., *A Progressive Grammar of Telugu*, Christian Literature Society, Madras, 1955.

Lisker, Leigh, *An Introduction to Spoken Telugu*, Council of Learned Societies, New York, 1963.

Rama Rao, C., *A Grammatical Sketch of Telugu* (Unpublished).

Subbarao, Vavilakolanu, *Sulabha Vyākaraṇam*, British Model Press, Madras.

Suri, Chinnaya, *Bala Vyākaraṇam*, Vavilla Ramaswami Sastrulu and Son, Madras, 1966.

Veeresalingam, Kandukuri, *Sangraha Vyākaraṇam*, Rajahmundry, 1930.

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NEGATION IN TULU

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IN Tuḷu' negation is expressed by employing negative forms, which may be either bound or free.

A. Bound negative forms

/ɪj, ci, ay, a, aḍ/are the bound negative forms which are used in the finite forms and /and/ in the non-finite forms of the verbs.

(*a*) *Negative bound forms in the finite verbs:*

Distribution

In the finite forms the distribution of the negative bound forms is as follows:

/-ci/ occurs after the root /bo: ḍu/; /-aḍ/ occurs in the imperative; /-ay/ occurs in the subjunctive except in the third person neuter where /-a/ occurs and /-ɪj/ elsewhere.

Examples

Conjugation of a few verbs in the negative will exemplify the distribution and clarify what has been said above.

I. Indicative

(*i*) *Past*

Structure:[2] Root+Tense+Negative+number-gender-person.

Paradigm[3]

Affirmative	*Gloss*	*Negative*[4]
tin-t-ɛ	'I ate'	tin-t-ɪj-i
tin-t-a	'you ate'	tin-t-ɪj-a
tin-t-e	'he ate'	tin-t-ɪj-e
tin-t-a:lɪ	'she ate'	tin-t-ɪj-a:lɪ
tin-t-iṇḍɪ	'it ate'	tin-t-ɪj-i

[1] By Tuḷu I mean here only the Bhaṇṭ dialect of Tuḷu as spoken at Viṭṭal of Baṇṭwaḷ Taluq of South Kanara.

[2] Structure of the negative alone is given throughout.

[3] The same paradigm is used for both perfect and imperfect tenses e.g., /tintɛ/'I ate/have eaten'.

[4] Though the number-gender-person marker, for the first person singular and the third person neuter singular, is different, in the affirmative, in the negative however it has the same shape.

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(ii) Non-past

Structure

Root+Tense+Negative[1]+number-gender-person.

Paradigm

Affirmative	*Gloss*	*Negative*
tin-p-ɛ	'I (will) eat'	tin-p-uj-i
tin-p-a	'you (will) eat'	tin-p-uj-a
tin-p-e	'he (will) eat/eats'	tin-p-uj-e
tin-p-a:lɪ	'she (will) eat/eats'	tin-p-uj-a:lɪ
tin-p-unḍɪ	'it (will) eat/eats'	tin-p-uj-i

II. Imperative

Structure: Root+negative+number.

Examples: /malpu/ 'do'.
/koru/ 'give'.

malp-aḍ-a 'you (sg) do not do'.
malp-aḍ-e 'you (pl) do not do'.
kor-aḍ-a 'you (sg) do not give'.
kor-aḍ-e 'you (pl) do not give'.

III. Subjunctive

Structure: Root+Negative+gender-number-person.

Examples

Affirmative	*Gloss*	*Negative*
tin-v-ɛ	'I may eat'	tin-ay-ɛ
tin-v-a	'you (sg) may eat'	tin-ay-a
tin-v-e	'he may eat'	tin-ay-e
tin-v-a:lɪ	'she may eat'	tin-ay-a:lɪ
tin-ɸ-u	'it may eat'	tin-a-ndɪ[2]

IV. -ci occurs as it is said above with /bo:ḍu/ 'want'. When /bo:ḍu/ occurs in combination with some other morpheme it acquires a new meaning, namely, 'should'.

e.g.,

malpu+bo:ḍu malpoḍu 'should be done'.

[1] ɪj → uj/labial-.

[2] /-a/occurs not only in the *third person neuter singular* of subjunctive but also in the impersonal constructions, e.g./a:vu/'it is possible'/a:v-a-ndɪ/'it is not possible'.

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In order to negate it /-ci/ is added to /malpoḍu/. e.g., /malpoḍci/ 'do not do'. Note here it does not give the meaning 'should not be done'; the form /-balli/ however, gives this meaning.[1]

Further examples:

kalpu+bo:ḍu → kalpoḍu 'should learn'.
kalpoḍu+ci → kalpoḍci 'do not learn'.
o:du+bo:ḍu → o:doḍu 'should read'.
o:doḍu+ci → o:doḍci 'do not read'.
balpu+bo:ḍu → balpoḍu 'should run'.
balpoḍu+ci → balpoḍci 'do not run'.

(*b*) *Negative bound forms in the non-finite verbs:*

/-and/ is the only one negative bound form that I have come across in the non-finite verbs. It occurs after the verbal root.

Examples:

(*i*) *Negative verbal participle:*

Structure: Root+Negative+Verbal particip. marker.

/paṇɪ/ 'tell'
paṇ-and-e 'not telling/having told'.

/pa:rɪ/ 'run'.
pa:r-and-e 'not running/having run'.

/parɪ/ 'drink'.
par-and-e 'not drinking/having drunk'.

(*ii*) *Negative adjectival participle:*

Structure: Root+Negative+Adj. particip. marker.

paṇ-and-ina 'who/which is (was, will) not (be) telling'.
par-and-ina 'who/which is (was, will) not (be) drinking' etc.

(*iii*) *Negative participial noun:*

Root+Negative+Adj. particip. marker+Pronoun.

paṇ-and-ina-a:ye→ paṇandina:ye 'he who does (will/did) not tell'.
paṇ-and-ina-a:lɪ→ paṇandina:lɪ 'she who does (will/did) not tell'.
paṇ-and-ina-avu→ paṇandinavu 'it which does (will/did) not tell'.

[1] c.f. B. *Free negative forms* (iii).

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B. Free negative forms

Forms:

(*i*) /ijji/ 'is not existing'.
(*ii*) /attɪ/ 'is not/no'.
(*iii*) /balli/ 'can/should not'.

These forms have no gender, number, and person distinctions.

Distribution

(*i*) /ijji/ negates existence. /uṇḍ/ is the affirmative: 'is'.

Examples:

a:ye mu:lɪ ijji 'he is not here'.
a:lɪ mu:lɪ ijji 'she is not here'.
avu mu:lɪ ijji 'it is not here'.

(*ii*) /attɪ/ negates the identity between a subject and what is predicated of it. Its occurrence is as that of /ijji/, / and ɪ/ is the affirmative.

Examples:

a:ye kaḷve 'he is a thief'.
a:ye kaḷve attɪ 'he is not a thief'.
avu pe:rɪ 'that is milk'.
avu pe:rɪ attɪ 'that is not milk'.

(*iii*) /balli/ negates the potentiality or the actuality of action. It occurs either with genitive or instrumental case in the case of nouns and with the infinitives in the case of verbs. /a:vu/ is the affirmative.

Examples:

with genitive: enki balli 'I am not able'.
instrumental: enaḍḍi balli 'I am unable'.
infinitive: malpera balli 'should not be done'.

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NEGATION IN GUJARATI[1]

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EVERY language has a system with a number of sub-systems. And each of the sub-systems, in its turn, has a well-knit system within itself, eventhough this may not be discernible to a layman who uses the language. An attempt is made here to show that the aspect of negation in Gujarati forms a well-knit system within a sub-system, even-though it appears to have randomness.

There are in all four negative particles[2] in Gujarati. These are: (1) *nə*, (2) *na* (3) *nəthi* and (4) *nəhĩ*. In certain specified environments, *na* and *nəhĩ* are in Free variation. Otherwise these four particles occur in mutually exclusive environments. We could, therefore, make a tentative statement that at the sentence level the aspect of negation is expressed by the morpheme {nəhĩ}. Since these forms occur only within a VP, a description of a VP in Gujarati is essential for the understanding of the occurrences of the aspect of negation in Gujarati.

Given below are some of the instances of a VP[3] in Gujarati.

Every VP in Gujarati contains atleast one constituent, viz., a verb (hereafter marked V). In the sentences given below, a V is the only constituent of the VP.

(1)[4] te suśe 'he will sleep'.
(2) te calśe 'he will walk'

A V which has the privilege of occurring as the only constituent of a VP is known as Intransitive verb (hereafter marked V_I). In addition to a V, a VP may also have a NP, as in the sentence given below.

(3) te bhat khaśe 'he will eat rice'

A VP having a NP as one of its constituents is a transitive verb (hereafter marked V_t). It would be seen at a later stage that as far as

[1] The writer is thankful to Usha Patel, Research Scholar in Applied Linguistics, Deccan College, Poona for the Data.

[2] At the morphological level, morphemes of negation occur also with the nouns, for instance, *səhıyog* 'co-operation', *əsəhıyog* 'non-co-operation'. Negations of this nature do not form part of this study.

[3] It is not proposed to offer an exhaustive treatment of the instances of VP's in Gujarati. Only those instances of a VP that are relevant to the use of negation are considered here.

[4] When an example is cited for the first time, the serial number of the example is given at the beginning of the sentence, while when an example is repeated, the original serial number is given in bracket at the end of the sentence.

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the system of negation is concerned, the language shows no opposition between a VP having a V_I and V_t.

A verb in Gujarati is capable of showing opposition in the time element of the action represented by the verb, for instance, in the sentences:

(4) te suto 'he slept'.

(5) te calyo 'he walked'.

are in opposition to the sentences:

te suśe (1) 'he will sleep'.

te calśe (2) 'he will walk'.

whereas the verb in the sentences 4 and 5 indicates an action that has been completed, the verb in the sentences 1 and 2 indicates an action that is to take place later on. While we designate the former as the past tense, the latter is designated as future tense. The language has also a present tense[1].

A verb in Gujarati also shows opposition in moods. This opposition is expressed either by a small class of words like *səkyo* 'can' (potential mood), *joie* 'must' (injunctive mood) etc., or by the root of the verb itself, as in *kha* 'eat' (imperative mood). The small classes of words that express the different moods are designated as modals, hereafter abbreviated as M. When the root is employed to represent the imperative mood, it is marked as Vm. Inasmuch as the occurrences of these modals including the Vm, restrict the choice of the particular negative particle that goes with a VP, the occurrences of these modals including that of the Vm are relevant to this study; for instance, only *nəhĩ* occurs with a VP that ends in a M or Vm as is seen in the sentences given below.

(6) kha 'eat (imp)'; khaśo nəhĩ 'do not eat'.

(7) sui səkyo 'could sleep' (potential); sui səkyo nəhĩ 'could not sleep'.

The use of this particular negative form would be discussed in detail later on. Given below are a few VP's having either a M or a Vm.

(8) kər 'do (imp)'

(9) te sui səkśe 'he can sleep (Potential)'

(10) te sui jəśe 'he might sleep (Future potential)'

[1] It is not proposed to treat in this study, the various rules for obtaining different tenses, moods or aspects in Gujarati. For the purpose of this study, it is sufficient to note that the verbs in Gujarati show opposition in tense and mood. And these oppositions have relevance to the choice of the particular negative particle that goes with a verb.

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(11) te suwũ joie[1] 'he must sleep (injunctive)'

(12) teṇe sui jəwũ joie 'he ought to sleep'.

A VP may have an auxiliary verb *che* 'is' with or without a preceding M.

The examples given below would illustrate this statement.

(13) te sui səke che 'he can sleep'.

(14) te suto[2] che 'he sleeps'.

The VP's cited so far had atleast one V as its constituent. There can also be VP's having only an auxiliary form preceded by an adverb or an adjective (NP) as is seen in the sentences given below:

(15) śyama əhĩ che 'shyama is here'.

(16) mari pase che 'is with me'.

(17) śyama sari che 'shyama is good'.

The examples given above show that a VP may consist of just an auxiliary verb following a adv/NP without any principal verb. In such instances, the auxiliary verb is known as copula and the construction is known as copular construction.

It was already seen that the verbs in Gujarati show a three-way opposition in tense. This three-way opposition is also available with the auxiliary forms, irrespective of the fact whether they function as an auxiliary verb or as a copula. The following examples would illustrate this statement.

sui səke che (13) 'can sleep'.

(18) sui səkto həto 'could have slept (if he wanted)'

(19) sui rəhyo che 'is sleeping'.

[1] The shape of the verb in the VP would depend upon the particular M that follows it; for instance, *səkśe* has the verb root preceding it, while *joie* has the infinitive form of the verb. Further since the opposition in time (tenses) is applicable to the M also, the shape of the V would also depend upon the tense of the following M. A detailed discussion of these points is outside the scope of this study.

[2] The difference between the momentary present (*suto che* 'sleeps'), present continuant (*sui rəhyo che* 'is sleeping') and the present perfect (*suwe che* 'just slept') etc., are ignored here as such differences are irrelevant to this study, because all VP's ending in *che* 'is' take the same negative form, viz., *nəthi*, for instance:

Neg+suto che→suto nəthi

Neg+suwe che→suto nəthi

Neg+sui rəhyo che→sui rəhyo nəthi

In other words, when a VP ends in the auxiliary form *che* 'is', *nəthi* substitutes the *che* of the VP, for obtaining the negative aspect.

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(20) sui rəhyo həto 'was sleeping'.
mari pase che (16) 'is with me'.
(21) mari pase həto 'was with me'.
(22) mari pase həśe 'will be with me'.
sari che (17) 'is good'.
(23) sari həti 'was good'.
(24) sari həśe 'will be good'.
(25) əhĩ həto 'was here'.
əhĩ che (15) 'is here'.
(26) əhĩ həśe 'will be here'.

The examples given above show that the auxiliary verb in Gujarati shows a three-way opposition in tense and that this opposition in tense is overtly indicated by three different forms of the auxiliary verb[1] *che* 'is'. It would be presently seen that by taking separate forms of negative particles by each of the three forms of the auxiliary verb, this three-way opposition in tense is overtly indicated even at the time of negativing the simple assertive forms of a VP having an auxiliary verb, that is, the form *nə* goes with *həto*, the past tense form of the auxiliary, *nəthi* goes with *che*, the present tense form of the auxiliary and *nəhĩ* goes with *həśe* the future tense form[2] of the auxiliary. The examples given below would illustrate this statement.

(27) Neg+ V auxp → Neg+suto həto → suto nəhəto 'was sleeping'.
Neg+VM auxp → (a) Neg+sui səkto həto (18) → sui səkto[3] nəhəto
(b) (28) Neg+sui səkyo həto → sui səkyo nəhəto 'was able to sleep'.
Neg+ V auxpr → Neg+suto che (14) → suto nəthi
Neg+VM auxpr → Neg+sui səke che (13) → sui səkto nəthi
Neg+Adv auxp → (a) Neg+əhĩ həto (24) → əhi nəhəto
(b) Neg+mari pəse həto (21) → mari pase nəhəto
Neg+Adv auxpr → Neg+əhĩ che (15) → əhĩ nəthi
Neg+Adv auxf → Neg+əhĩ həśe (26) → əhĩ nəhĩ həśe[4]
Neg+NP+auxp → Neg+saro həto (23) → saro nəhəto

[1] These forms may be marked as:
auxp → həto; aux_{Pr} → che; aux_{f} → həśe

[2] *həśe* does not occur with V (M) i.e., it functions only as a copula and not as an auxiliary verb, whereas the present tense and the past tense forms of the auxiliary verb *che* can occur both as an auxiliary verb and also as a copula.

[3] *nəhəto* is also pronounced as *nəhoto*.

[4] For an emphatic statement *nəhĩ-həśe* is always uttered as *həśe nəhĩ*. This type of change in the word order is ignored here.

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Neg+NP+auxpr → Neg+sari che (17) → sari nəthi
Neg+NP+auxf → Neg+sari həśe (24) → sari nəhĩ həśe

Eventhough the examples cited so far included the occurrences of only simple verbs preceding an auxiliary verb, the statement that the three different forms of the auxiliary verb, viz., *həto*, *che*, *həśe*, take three different negative particles when a VP ending in an auxiliary is negatived, applies equally to compound verbs preceding an auxiliary verb, for instance,

Neg+sui rəhyo che (19) → sui rəhyo nəthi
Neg+sui rəhyo həto (20)s → sui rəhyo nəhəto

Having covered the total distribution of the auxiliary verbs, we might now have a look at the means whereby the other forms of a VP are negatived. In this let us consider, in the first instance, the VP's ending in a modal. In this we would presently see that the system of negation in Gujarati is a well-knit one inasmuch as all VP's of assertive type ending in a VM is negatived by adding *nəhĩ* to the VM. A few examples would illustrate this statement.

Neg+sui səkśe (9) → Sui səkśe nəhĩ
Neg+sui jəśe (10) → sui jəśe nəhĩ
Neg+sui səkyo (7) → sui səkyo nəhĩ

In addition to the negative particle *nəhĩ* the negative particle *na* could also be used for negativing the VP's ending in a M. However, when *na* is taken, it occurs between V and M for instance,

Neg+sui səkśe (9) → sui na səkśe
Neg+suwũ joie (11) → suwũ na joie

We could, therefore, state that a VP of an assertive type ending in a M can be negatived either by adding the negative particle *nəhĩ* to the VM or by the negative particle *na* preceding the M. The utterences with *nəhĩ*, however, are more emphatic than the ones with *na*.

Lastly we should consider the situations wherein a VP ends in a principal verb. We would presently see that in all such situations, the verb would be either in the past/future tense or in the imperative mood. Given below are a few examples to illustrate this statement.

suśe (1) 'will sleep'.
calśe (2) 'will walk'.
calyo (5) 'walked'.
kər (8) 'do (imp.)'.

The negative particle *nəhĩ* is used in the instances covered by the above statement for e.g.,

Neg+suśe (1) → suśe nəhĩ
Neg+calśe (2) → calśe nəhĩ

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Neg+calyo (5) → calyo nəhĩ

Neg+kər (8) → kəriś nəhĩ

We could, therefore, state that when a VP ends in a V, which may be either in the past/future tenses or in the verbal root (imperative mood), the negative particle *nəhĩ* is added to the VP for negativing it.

As far as negativing the VP's in the assertive form is concerned, three statements have been made so far. These three statements would cover all instances of negativing the VP's in the assertive form. However, the examples of the VP's cited so far had only V_I's. It would presently be seen that the three statements made earlier are applicable to VP's having both transitive and intransitive verbs. A few examples of VP's having intransitive and transitive verbs would illustrate this point, e.g.,

Neg+suto həto (27) → suto nəhəto

(28) Neg+bhat khato həto → bhat khato nəhəto 'was eating rice'.

(29) Neg+bhat khai səkyo həto → bhat khai səkyo nəhəto 'was able to eat rice'.

Neg+suto che (14) → suto nəthi

(30) Neg+bhat khai che → bhat khato nəthi

(31) Neg+bhat khai səkyo che → bhat khai səkyo nəthi

Neg+sui səkyo (7) → sui səkyo nəhĩ ~ sui na səkyo

(32) Neg+bhat khai səkyo → bhat khai səkyo nəhĩ ~ bhat khai na səkyo 'could eat rice'.

Neg+suśe (1) → suśe nəhĩ

Neg+bhat khaśe (3) → bhat khaśe nəhĩ

Neg+kər (8) → kəriś nəhĩ

Neg+bhat kha (6) → bhat khaśo nəhĩ

The examples given above clearly establish that as far as the system of negation is concerned, the same rules apply to VP's having both V_I's and V_t's.

The negative particle *na*, in addition to its occurrence within a VP (already stated earlier) can occur as a clause in itself, for instance,

na, hũ nəthi suto 'no, I am not sleeping'.

The position of the negative particle within a VP is not very rigid. In fact the negative particle precedes the verb or the M, as the case may be, when the negative aspect is to be emphasized, for instance,

(33) Neg+hũ suwe chũ → (a) hũ suto nəthi 'I am not sleeping'.
(b) hũ nəthi suto 'I am (certainly) not sleeping' (i.e., I am doing anything but sleeping).

(34) Neg+hũ sui səkũ chũ → (a) hũ sui səkto nəthi 'I could sleep.'
(b) hũ sui nəthi səkto 'I couldn't sleep (because it was impossible to sleep)'.

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In summing up, it may be stated that though there are four distinct forms in Gujarati for expressing the aspect of negation, all these forms have a non-contrastive distribution. And the criteria for the distribution are the tenses and the moods of the verb including the copula of a VP. In the case of VP's ending in a M, the negative particles *nəhĩ* and *na* are in free variation. The aspect of negation is indifferent to the opposition between a transitive and an intransitive verb. In other words, other things remaining the same, the same negative form goes with the VP's having both transitive and intransitive verbs. Thus we find that the aspect of negation forms a well-knit system in this language and this system is evident even in those instances when two negative particles are in free variation.

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SOME ASPECTS OF HINDI NEGATION*

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IN THIS paper some aspects of Hindi Negation are explained by presenting the surface as well as deep structures of relevant constructions wherever essential. Explanation of various constructions is confined basically to the relevant sequences wherever the negative morpheme occurs.

In Hindi the *Neg(ative)* morpheme is realised in various positions in a sequence at surface level; while at deep level it is immediately dominated by S(entence). Some such sequences where the negative morpheme figures are dealt with one after another in the section below.

1.1. *Neg. V*

Consider the following sentences

(1) kamla· nahĩ· ja·ti· hɛ 'Kamla does not go'.
(2) mohan nahĩ· a·yega· 'Mohan will not come'.
(3) laṛka· nahĩ· doṛa· 'The boy did not run'.

When we look into the surface as well as deep structures of the above given sentences, we find *Neg.* at surface level in a pre V(erb) position, while, it is immediately dominated by S at its deep level. Permutation replaces *Neg* from its original place and brings it before V:

Neg NP VP => NP Neg VP.[1]

The surface structure of example (1) is as shown in Fig. 1.

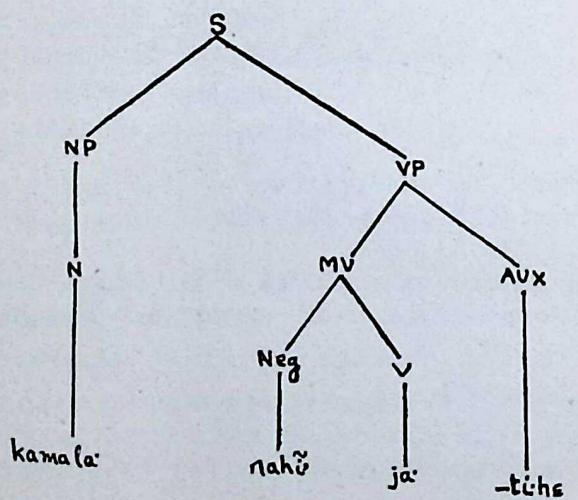

FIG. 1

*I am thankful to K. Rangan, who encouraged me in this field and to R. N. Srivastva, Delhi University for his comments. My thanks are due to H. S. Biligiri for his valuable suggestions regarding presentation, and scope of this paper.

[1] Stylistic variations play a great role in languages in their grammatical set up. In Hindi also the position of *Neg.* is changed from *Neg. V* to *V Neg.* though

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The deep structure of example (1) is as shown in Figure 2.

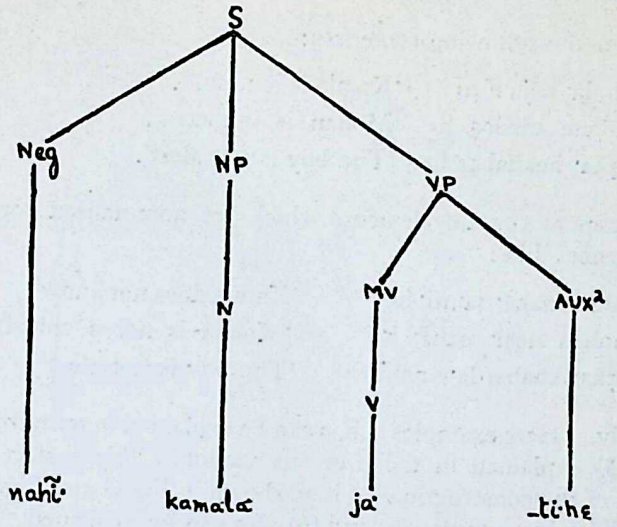


FIG. 2

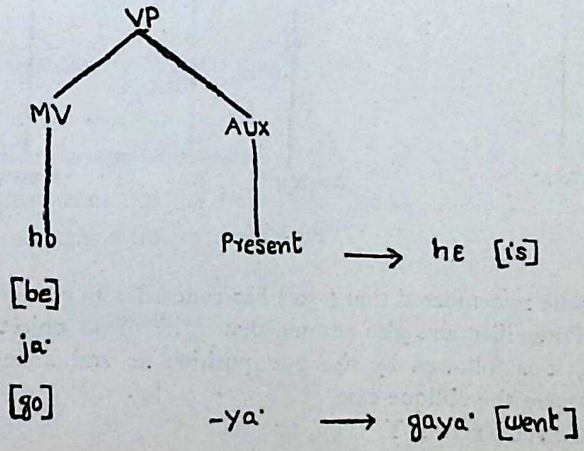
Construction (2) and (3) have the same type of surface and deep structures, hens they need no explanation.
the elements remain the same. For example sentence (1) will be kamla· ja·ti· nahĩ· hɛ. 'kamla does not go' (emp.) similarly sentences (2) and (3) will be—

mohan a·yega· nahĩ 'Mohan will not come' (emp.)

laṛka· dɔra· nahĩ 'The boy did not run' (emp.) respectively.

At present there is a great controversy about the methodology in dealing with such stylistic variations and the changes in grammatical set up thereby. Hence, we may leave this problem for some other occasion.

[2] Also the grammatical formations such as Aux. *-ta· -ya·* have to be explicitly stated as how these continue with the preceding verb's operator's modal's etc. The diagrams assure the following combinations, given on the left and the results given on the right, i.e.,



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1.2 *Negative Nominalisation*

Consider the following sentences:

(4) kamla· anja·n hɛ 'Kamla is ignorant'.
(5) mohan nirdoṣ hɛ 'Mohan is innocent'.
(6) laṛka· bekhabar hɛ 'The boy is not alert'.

These sentences contain elements which are nominalised constructions from sentences like:

(a) kamla· nahĩ· ja·nti· hɛ 'Kamla does not know'.
(b) mohan doṣi· nahĩ· hɛ 'Mohan is not a culprit'.
(c) laṛka· khabarda·r nahĩ· hɛ 'The boy is not alert'.

respectively. Here examples a, b, c can be explained in terms of sentences (1), (2), (3) explained in the previous section. The surface and deep structures of the construction (4) is as shown in Fig. 3 and Fig. 4 respectively. Similarly examples (5) and (6) also can be explained. It will be appropriate to state here that verbs like *ja·n-* (to know) *paṛh-* (to read) etc., when they occur in sequences like *Neg. V* are nominalised, while verbs like *ja·-* (to go), *de-* (to give) etc., are not nominalised.

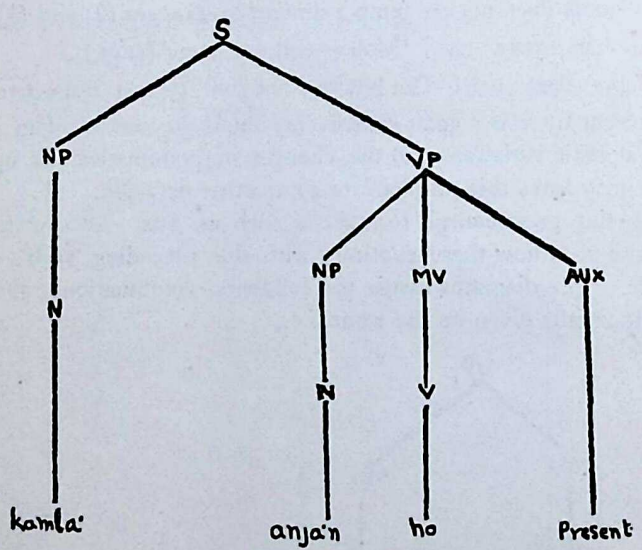

FIG. 3

It should also be remembered that (-ya·) has concord with gender and number of subject. These diagrams also assume that if the direct object is animate/definite then, it is followed by the post-position *ko* and noun *N* before a post-position takes the oblique case.

For details see Kachru, Y. 1966, pp. 25.

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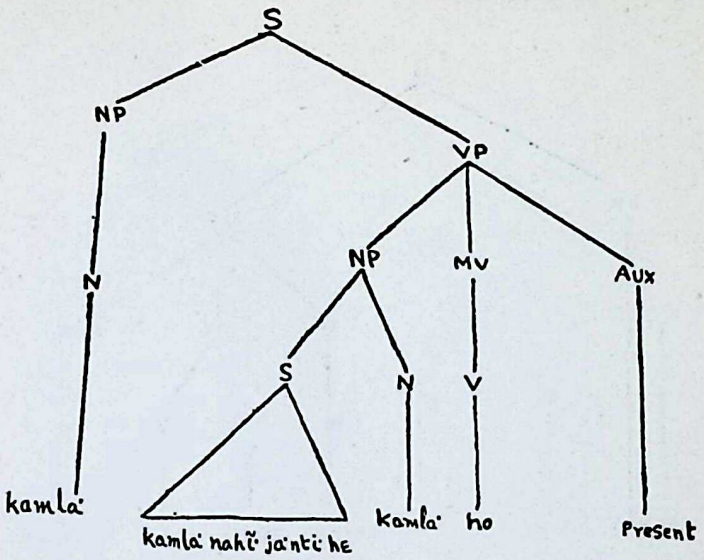

FIG. 4

Those verbs which undergo negative nominalisation can be further negated so as to give affirmative sentences. This phenomenon is dealt with in detail in the following section.

1.3. *Double Negation*[3]

There are two kinds of double negation:

I. Negation which gives affirmative sentences, and

II. Negation at two different places in the same sentence.

These are taken up one by one below:

1.3.1. Consider the following sentences:

(7) kamla· anja·n nahĩ· hɛ
'Kamla is not ignorant'.

(8) mohan nirdoṣ nahĩ· hɛ
'Mohan is not innocent'.

(9) laṛka· bekhabar nahĩ· hɛ
'The boy is alert'.

[3] The occurrence of three Negative morphemes in a sentence without a co-ordinator is not possible in Hindi.

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The surface and deep structures of example (7) is as shown in Fig. 5 and Fig. 6 respectively:

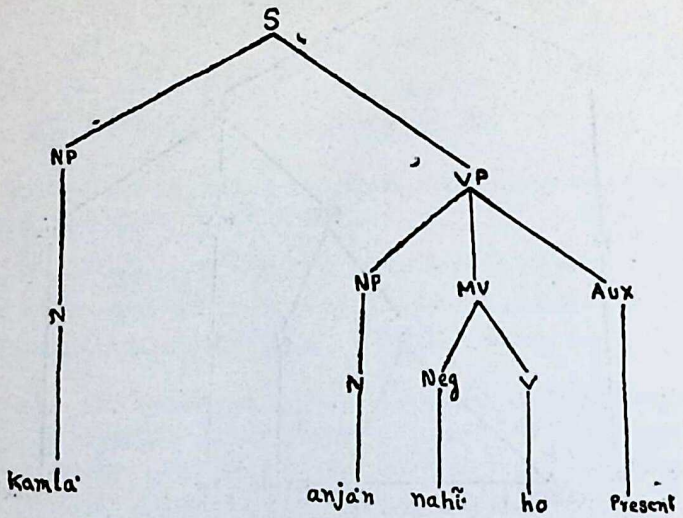

Fig. 5

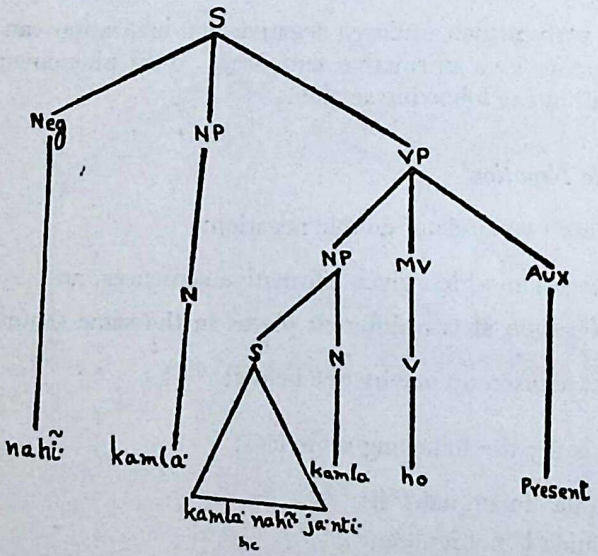

Fig. 6

Examples (8) and (9) also can be explained in a similar manner.

1.3.2. Consider the following sentences:

(10) anja·n kamla· nahĩ· ja·ti· he 'The ignorant Kamla does not go'.

(11) nirdoṣ mohan nahĩ· a·ta· he 'The innocent Mohan does not come'.

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(12) bekhabar laṛka nahĩ· dɔṛta· hɛ 'The unalert boy does not run'. The surface and the deep structures of example (10) are as shown in Fig. 7 and Fig. 8 respectively.

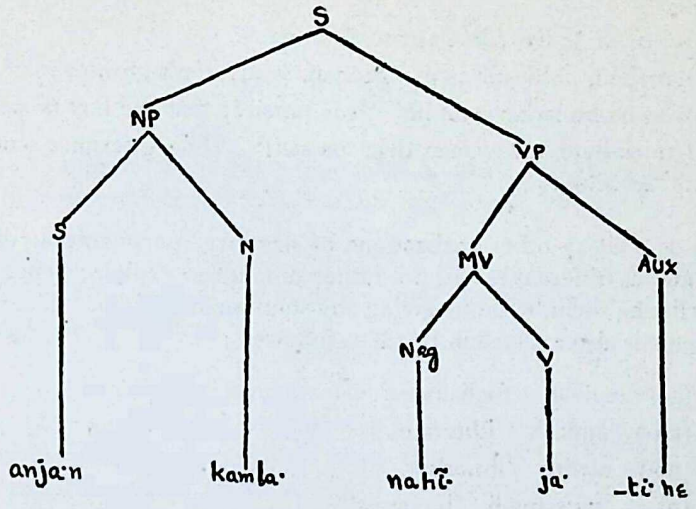

FIG. 7

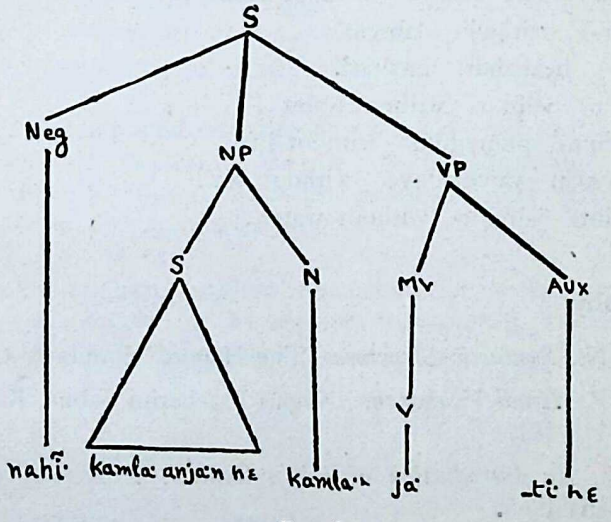

FIG. 8

Similarly examples (11) and (12) also can be explained.

1.4. *Some residual problems*

1.4.1. The negative morpheme (mat).

It is used in imperative sentences. For example:

(13) kamla·, mat ja· 'Kamla (you) don't go'.

(14) mohan, mat ja·o 'Mohan, (you) don't go'.

(15) a·p mat ja·iye '(Please) you don't go'.

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1.4.2. The negative morpheme (na)

It implies request, probability or determination of the action. For example:

(16) a·p na ja·iye '(Please) you don't go'.

(17) mohan, abhi· na· ja·o 'Mohan, (you) don't go now'.

(18) ho na ho laṛka· rota· ho 'It is possible that the boy is weeping'.

(19) musi·batē mera· man ḍiga· na sakī· 'The grievance could not alter my decision'.

These, as well as other realizations of negative morpheme at different places and at different levels, are rather difficult to explain; hence we are merely listing them, without giving any solution at present. The *negative* morpheme is also realized in Hindi as follows:

(a-) avivek 'foolishness'.
(an-) anpaṛh 'illiterate'.
(ni-) nirdoṣ 'innocent'.
(na·-) na·samajh 'ignorant'.
(bina·) bina· kha·ye 'without eating'.
(gair-) gairha·jir 'absent'.
(be-) bekhabar 'unalert'.
(-hi·n) jalhi·n 'without water'.
(-vihi·n) praṇvihi·n 'without life.'
(-šu·nya) va·yušu·nya 'without air'.
(-rahit) jalrahit 'without water'.

Bibliography

Chomsky, N., *Syntactic Structures*. The Hague, Mouton & Co., 1957.

Guru, K. P., *Hindi Vyakaran*. Nagari Pracharini Sabha, Kashi, 1957. Pp. 146-147.

Kachru, Y., *An Introduction of Hindi Syntax*, University of Illinois, Urbana 1966.

Klima, E. S., *Negation in English*. The structure of Languages (eds.) Katz and Fodor Prentice Hall Inc. 1964. Pp. 246-323.

Zimmer, K. E., *Affixal Negation in English and other Languages*, Monograph No. 5 supplement to Word 20.

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NEGATION IN KONKANI

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0. THE basic word for negation in Konkani, which puts forth the denial of facts, proposals etc., is /na/ 'no' opposite of /həy/ 'yes'.

1. Negation in Konkani, is mainly a feature of verb morphology. It is obtained by placing the negative particle either before or after the affirmative constructions.

1.1. The verbal constructions in Konkani may be simple or compound. The simple ones are made up of a single verb-root plus tense/aspect marker (with an optional tense extension) further followed by gender-number-person markers. The simple verbal constructions may also contain an auxiliary. These are /asəp/ 'to be' or /jawəp/ 'to happen'. The use of auxiliary /jawəp/ 'to happen' is restricted. It occurs only in its optative form whenever used as an auxiliary. /asəp/ has more freedom of occurrence and shows almost all the tenses and moods.

1.2. The compound verbal constructions are made up of two different verbs, in which the form of the first verb is *fixed* and the second verb shows all the categories of tense and moods. These verbs may still further be followed by auxiliaries.

2. As the auxiliary /asəp/ 'to be' plays a major role in verbal constructions, we will first discuss the negative formation of the same. It is obtained by prefixing the negative particle /n-/ to the affirmative forms that/asəp/ shows:

They are as follows:

	Affirmative	*Negative*	
2.1.	asa 'is'	na 'is not'	imperfect
	asta 'is'	nasta 'is not'	present-habitual
	astɔlo 'will be'	nastɔlo 'will not be'	future

[1] The dialect taken here for analysis is spoken by Brahmin Hindus of Goa.

[2] I convey my sincere thanks to H. S. Biligiri and A. R. Kelkar for their valuable help in writing this paper.

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astalo 'used to be'	nastalo 'was not used to be'	past-habitual
aslo 'was'	naslo 'was not'	past
aśillo 'had been'	naśillo 'had not been'	plu. perfect

2.1.1.

asəp 'to be'	nasəp 'not to be'	infinitive
aslyar 'if be'	naslyar 'if not be'	conditional
asuṅk 'to be'	nasuṅk 'not to be'	infinitive-participle
asčɛ̃ 'to be'	nasčɛ̃ 'not to be'	infinitive-participle

2.2. There is one more negative marker /nhəy/ meaning 'is not' and which does not have any corresponding affirmative form. /nhəy/ does not show any gender, number, or person distinction. Its use is illustrated below by the following examples:

/tɔ bɔrɔ asa/ 'He is well'.

/tɔ bɔrɔ na/ 'He is not well'

/tɔ bɔrɔ/ 'He is good'.

/tɔ bɔrɔ nhəy/ 'He is not good'.

or,

/tɔ huśar asa/ 'He is active (healthy).'

/tɔ huśar na/ 'He is not active'.

/tɔ huśar/ 'He is clever'.

/tɔ huśar nhəy/ 'He is not clever'.

It will be clear from the above examples that /nhəy/ is used to negate the non-verbal sentences.

3. Now we will discuss the negative formation in all the tenses and moods. But at first the affirmative constructions will be explained as they form the basis for negative ones. All the affirmative forms are put into a chart below. The following abbreviations are used in the chart:

Gender = G, Number = N, Person = P.

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3.1. Finite forms:

* raw 'stay'

—t —N.P —imperfect	†raw-t-a-	'stays'
—t —al=G-N-P —Past habitual$_1$	raw-t-a-l-o	'used to stay'
—t —(ɔ)l—G-N-P —Future	raw-l-(ɔ)l-o	'will stay'
—ə —Past habitual$_2$	raw-ə	'used to stay'
—l —G-N-P —Past	raw-l-o	'stayed'
—l —N-P —Perfect	raw-l-a	'has stayed'
—l —l—G-N-P —Pluperfect (l-l—ɔ ill/ləl)	raw-ill-o~raw-ləl-o	'had stayed'
—N-P I, II—Imperative	raw	'stay'
—N-P I, II, III—Optative	raw-ət	'may stay'

3.1.1. Non-finite forms:

—əp—infinitive	raw-əp	'to stay'
—l-yar—conditional	raw-l-yar	'if stayed'
—t-ana—adverb of concomitant action	raw-t-ana	'while staying'
—ṅk ~ uṅk—infinitive participle$_1$	raw-ṅk	'to stay'
—c~č—G-N-P—infinitive participle$_2$	raw-c-o	'to stay'

3.2. Both the habitual forms merge into one when they enter into negative constructions. Similarly both the future and optative forms have one negative. It is obtained by adding negative auxiliary in its present tense form to the infinitive participles. The negative in perfects is formed by placing the negative auxiliary in present and past tense form after infinitive participles. The imperative negative is formed by adding /naka/ 'don't want' with its number distinction to the affirmative form. The examples are given below:

Affirmative		*Negative*
1.	Habitual$_1$	raw-ə+n-as-past
	Habitual$_2$	ex. rawə naslo (did not use to stay)
2.	Future	raw-c-G-N-P+na
	Optative	ex. rawco na (will not stay or may not stay)

* The verb root /raw/ has been used for the purpose of illustration.

† All the examples are given in masculine gender and singular number.

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Affirmative	*Negative*
3. (*a*) Perfect	raw-ṅk+na-N ex. rawṅk na/nan (has/have not stayed)
(*b*) Plu. perfect	raw-ṅk+n-as-past ex. rawṅk naslo (had not stayed)
4. Imperfect	raw-ə-na/N ex. rawə na/nan (does/do not stay)
5. Past	raw+past+na ex. rawlo na (did not stay)
6. Imperative	raw+naka-N ex. raw naka /nakat (do not stay)

3.2.1. Sometimes infinitive takes /na/, indicating the emphasis on the decision of not doing a particular thing. e.g.,

/thəⁿy wəcəp na/ 'no more going there'.
/thəⁿy rawəp na/ 'no more staying there'.

4. As has been mentioned above a simple verbal construction may contain an auxiliary. These auxiliaries are /asəp/ and /jawəp/. The constructions with /asəp/ are made negative by replacing the affirmative auxiliary with the negative one.

e.g., *affirmative*	*negative*
/tɔ rawtlo aslo/ 'He would have stayed'.	/tɔ rawtlo naslo/ 'He would not have stayed'.
/tɔ rawtlo astɔlo/ 'He would be staying'.	/tɔ rawtlo nastɔlo/ 'He would not be staying'.
/taka rawčɛ̄ aslɛ̄ⁿ/ 'He had to stay'.	/taka rawčɛⁿ naslɛⁿ/ 'He did not have to stay.'

4.1. The auxiliary /jawəp/ occurs only in the optative form which is added to simple negative constructions mentioned above. e.g.,

/tɔ rawta jayt/ 'He may stay'.
/tɔ rawəna jayt/ 'He may not stay'.
/tɔ rawtlo jayt/ 'He might stay'.
/tɔ rawtlo najayt/ 'He might not stay'.

4.1.1. /jayt/ can also be preceded by the forms of /asəp/ occasionally, e.g.,

/taka rawčɛⁿ asa jayt/ 'He may have to stay'.
/taka rawčɛ̄ⁿ na jayt/ 'He may not have to stay'.

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4.2 There is another type of construction formed by adding negative particle /nhəy/. It is again followed by forms of /asəp/. e.g.,

/taṇẽ rawčɛⁿ/	/taṇɛⁿ rawčɛⁿ nhəy/
'He should stay'.	'He should not stay'.
/taṇẽ rawčɛⁿ aslɛⁿ/	/taṇɛⁿ rawẽ nhəy aslɛⁿ/
'He should have stayed'.	'He should not have stayed'.

5. The compound verbal constructions are made up of two verbs. The form of the first verb in the sequence is fixed, while the second verb shows all the conjugation. The first verb in the sequence either occurs as a gerund (/rawn/'having stayed') or as an infinitive participle (/rawṇk/ 'to stay'.) The second verb in the sequence shows the simple verbal construction with its conjugation in negative.

Examples:

Affirmative	*Negative*
/tɔ bəsun rawtlo/	/tɔ bəsun rawcona/
'He will continue to sit'.	'He will not continue to sit'.
/taka ulowṅk yətalɛⁿ/	/taka ulowṅk yənaslɛⁿ/
'He could speak'.	'He could not speak'.
*/tɔ wəcuṅk śəktajayt/	/tɔ wəcuṅk śəkə najayt/
'He may be able to go'.	'He may not be able to go'.

6. There are two more verbs in konkani which behave in an entirely different way. These are /jay/-'want' and /jaṇə/ 'know' having /naka/ 'don't want' and /nəkəḷə/ 'don't know' as their negative, respectively. These negative forms occur as they are in the imperfect tense, but they add an affirmative auxiliary when they show further conjugation.

Examples are given below:

(/taka/) /naka/ 'does not want' (imperfect).
/naka aslɛⁿ/ 'did not want' (past).
/naka aśillɛⁿ/ 'had not wanted' (plu. perfect).
(/tɔ/) /nəkəḷə/ 'does not know' (imperfect).
/nəkəḷə aslo/ 'did not know' (past).
/nəkəḷə aśillo/ 'had not known' (plu. perfect).

7. The negation in nominal forms is obtained by perfixing the negative particle /ə-/, /bin-/ or /ni-/ to the stems. These forms are very few and most of them are borrowed from sanskrit.

* Positive forms of such type are rare.

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e.g.,

ə-wičari 'thoughtless'.
ə-śəky 'impossible'.
əspəṣṭ 'unclear'.
bin-pəgari 'without salary'.
bin-molaco 'without any price'.
ni-lajro 'shameless'.

8. Some of the negative auxiliary forms are used as subordinating particles in complex sentences. These are as follows:

8.1 /nastana/ adverb of concomitant action'.

/saṅgu nastana wəcu naka/
'Don't go *without* telling'.
/tɔ wəcu nastana rawt/
'He may stay (do) *without* going'.
/pəḷəy nastana kəśɛ̃ səmjətlɛ̃/
'How one is to understand without seeing'.

8.1.2 The subordination in conditional sentences is either obtained by negative conditional form of the verb 'to be' /naslyar/ of 'to happen' /na jalyar/ both meaning 'if not'. /naslyar/ is added when the subordinated sentence is a copula sentence,

/na jalyar/ is added elsewhere. e.g.

1. /təśɛ̃ naslyar haⁿw wəččenaslẽ/
'I would not have gone if it was not so'.
/tɔ thəⁿy naslyar tũ pɔtto yɔ/
'You come back if he is not there'.

2. /tɔ aylo na jalyar mhaka saŋ/
'Tell me if does not come'.
/haⁿw gɛleⁿ na jalyar kam jawčẽ na/
'The work will not be done if I don't go'.

9. The negative particle /nalyar/ 'otherwise' is used as a co-ordinating conjunction in Konkani, e.g.,

/tuⁿ yɔ nalyar haⁿw wəččɛ̃ na/
'You come *otherwise* I will not go'.
/tɔ yɛⁿt nalyar kəḷəyt/
'He will come *or else* he will inform'.

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9.1 'neither ... nor' sentences in konkani are formed by having two negative sentence with the emphatic particle, e.g.,

/hɛ^{n}y*na tɛ^{n}yna/ 'neither this nor that'.
/tɔ yɛ^{n}wkuy na ani kəḷə^{n}wkuy na/
'Neither did he come nor inform'.

9.2 The pronominal adjectivals and adverbials are formed in the same way.

ka^{n}y na 'nothing'.
kɛ̣nnayna 'never'.
kəśɛyna 'in no way'.
koṇṇa 'no one, none'.

* /y/ is the emphatic particle.

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NEGATION IN PANJABI

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1. Negation is expressed in Panjabi by the negative markers *nai*^{n} and *na*, 'not'*. Negative forms do not show any distinction of number and gender.

2. *Nai*^{n} is used for all the present tense forms (Examples, 1 *a-c*, 2-*a*, 3*a*, 7*a*, 10, 12, 15, 16, 17, 18, 19, 20). For optative forms (Example 6), imperative (Example 5, 14) and compound sentences (Example 8) negative is expressed by the negative marker *na*. *na* and *nai*^{n} are optionally used for all the past (Example 1 *b-d*, 2 *b*, 3 *b*, 7 *b*, 11, 13), future (Example 4) tense forms, conditional sentences (Example 9) and interrogative sentences (Examples 22-*a-b*). The examples with *nai*^{n} forms, however are more common in the language.

3. In verbal phrases consisting of single verb (Examples 1 *a-b-c-d*,) or verb+auxiliary verb (Examples 2, 3), or Infinitive verb+auxiliary verb (Example 7), or Infinitive verb+verb+auxiliary verb (Examples 16–19), or verb stem+verb+auxiliary verb (Examples 10, 15), or verb+ auxiliary verb+verb+auxiliary verb (Example 21), negative marker *nai*^{n} can be placed before or after the main verb except in present perfect and past perfect (Example 3), compound sentences (Example 8) and in the second clause of conditional sentences (Example 9), where it occurs only before the main verb. *na* is always placed before the main verb (Examples 1-6, 8, *a*, 11, 13, 14, 21) except in the situation where it has a value of a negative interrogative in sentences (Example 22-*b*).

4. It is customary to drop *hai*, 'is' and *hain*, 'are' (present tense forms of the verb *hona*, 'to be', occurring as a main verb or as a helping verb in negative sentences (Examples, 1-*a-b*, 2-*a*, 3-*a*, 7-*a*, 10, 12, 15-20), except in the constructions indicating compulsion where *hai* is retained (Examples 7-9).

Examples are given below to illustrate the above statements.

Single verb (past/present tense forms)

1. Singular

(*a*) ó munḍā hai 'he is a boy'

ó munḍā nai^{n} (hai)[1] 'he is not a boy'

or

ó munḍā (hai) nai^{n} 'he is not a boy'

(*b*) ó munḍā sī, 'he was a boy'

ó munḍā nai^{n} /na sī 'he was not a boy'

* It has to be noted that the negative marker *nai* has a rising tone which, however, has not been shown due to lack of type-faces.

[1] The parentheses indicate that the form enclosed is deleted.

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or

ó munḍā sī nai^{n} 'he was not a boy'

Plural

(*c*) Santre miṭṭhe hain 'the oranges are sweet'
Santre miṭṭhe nai^{n} (hain) 'the oranges are not sweet'

or

Santre miṭṭhe (hain) nai^{n} 'the oranges are not sweet'

(*d*) Santre miṭṭhe sī 'the oranges were sweet'
Santre miṭṭhe nai^{n} /na sī 'the oranges were not sweet'

or

Santre miṭṭhe sī nai^{n} 'the oranges were not sweet'

2. Verb+auxiliary verb (present/past tense)

(*a*) ó bazār jā^{n}dā hai 'he goes to bazar'
ó bazār nai^{n} jā^{n}dā (hai) 'he does not go to bazar'

or

ó bazār jā^{n}dā naī (hai) 'he does not go to bazar'

(*b*) ó bazār naī^{n}/na jā^{n}dā sī 'he was not going to bazar'

or

ó bazār jā^{n}dā nai^{n} /na sī 'he was not going to bazar'

3. Verb+auxiliary verb (present perfect/past perfect)

(*a*) mai^{n} dɔre te āyā hā^{n} 'I have come on a tour'
mai^{n} dɔre te nai^{n} āyā (hā^{n}) 'I have not come on a tour'

(*b*) mai^{n} dɔre te nai^{n} /na āyā sī 'I had not come on a tour'

4. Single verb (future tense)

munḍā skūl jāwegā 'the boy will go to school'
munḍā skūl nai^{n} /jāwegā 'the boy will not go to school'

or

munḍā skūl jāwegā nai^{n} 'the boy will not go to school'

5. Negation in Imperative mood

jāwo 'please go'
na jāwo 'please do not go'

6. Negation in optative mood

ó bazār jāwe 'he should go to bazar'
ó bazār na jāwe 'he should not go to bazar'

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7. Infinitive verb+auxiliary verb (present/past tense)

(*a*) mai^{n} bazār jānā hai 'I have to go to bazar'
mai^{n} bazār naī jānā hai 'I do not have to go to bazar'

or

mai^{n} bazār jānā nai^{n} hai^{n} 'I do not have to go to bazar'

(*b*) mai^{n} bazār naī jānā sī 'I did not have to go to bazar'

or

mai^{n} bazār jānā nai^{n} sī 'I did not have to go to bazar'

8. Negation in compound sentences

óne na kuch khāda na pitā 'Neither he ate nor he drank'

9. Negation in conditional sentences

je tusī páṛde te pas honde 'If you had studied you would have passed'

je tusī nai^{n} /na páṛde te pās nai^{n} /na honde 'If you had not studied you would have not passed'

4. When negative marker is added to a affirmative sentences consisting of compound verb i.e. Infinitive verb+verb, verb stem+verb, the second inflected verb of the compound verb is dropped except, raínā, saknā, painā, cánā, cāídā (Example, 15-19), and the first verb is inflected. In combinations like noun+verb negative marker can be placed before the noun. Examples follow

10. Verb stem+verb+auxiliary verb (present tense)

ó merī gal màn lai^{n} dā hai 'he agrees to what I say'
ó merī gal mandā nai^{n} (hai) 'he does not agree to what I say'

or

ó merī gal nai^{n} manda (hai) 'he does not agree to what I say'

11. Verb stem+verb+auxiliary verb (past tense)

óne merī gal màn laī 'he agreed to what I said'
óne merī gal nai^{n} /na mànī, 'he did not agree to what I said'

or

óne merī gal mànī nai^{n} 'he did not agree to what I said'

12. Verb stem+verb+auxiliary verb (present perfect tense)

óne merī gal màn lìtī hai 'he has agreed to what I have said'
óne merī gal nai^{n} mànī (hai) 'he has not agreed to what I have said'

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13. Verb stem+verb+auxiliary verb (past perfect tense)

óne merī gal màn laī sī, 'he had agreed to what I had said'
óne merī gal mànī nai^{n} /na, si 'he had not agreed to what I had said'

or

óne merī gal nai^{n} /na mànī si 'he had not agreed to what I had said'

14. Verb stem+verb+auxiliary verb (imperative mood)

merī gal màn lawo 'please agree to what I say'
merī gal na mano 'please do not agree to what I say'

15. Verb stem+verb+(raí nā) auxiliary verb (present tense)

ó bazār jā ráyā hai, 'he is going to bazar'
ó bazār nai^{n} jā ráyā (hai) 'he is not going to bazar'

or

ó bazār jā nai^{n} ráyā (hai) 'he is not going to bazar'

16. Infinitive verb+verb (cá^{n}ā)+auxiliary verb (present tense)

ó kàm karnā cā^{n}dā hai 'he wants to work'
ó kàm karnā nai^{n} cā^{n}dā (hai) 'he does not want to work'
ó kàm nai^{n} karnā cā^{n}dā (hai) 'he does not want to work'

17. Infinitive verb+verb (cāídā)+auxiliary verb (present tense)

ónū jānā cāídā hai 'he should go'
ónū jānā nai^{n} cāīdā (hai) 'he should not go'

or

ónū nai^{n} jānā cāīdā (hai) 'he should not go'

18. Verb stem+verb (saknā)+auxiliary verb (present tense)

ó gā sakdā hai 'he can sing'
ó gā nai^{n} sakdā (hai) 'he cannot sing'
ó naī gā sakdā 'he cannot sing'

19. Infinitive verb+verb (paínā)+auxiliary verb (present tense)

mai^{n}nū páṛnā paindā hai 'I have to read'
mai^{n}nū páṛnā nai^{n} paindā (hai) 'I do not have to read'

or

mai^{n}nū nai^{n} páṛnā paindā (hai) 'I do not have to read'

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20. Noun+verb+auxiliary verb (present tense)

ó merā sāth dendā hai, 'he stands by me'
ó merā sāth naī dendā (hai), 'he does not stand by me'

or

ó merā sāth dendā nai^{n} (hai) 'he does not stand by me'

or

ó merā nai^{n} sāth dendā (hai) 'he does not stand by me'

5. When the negative marker is added to a sentence consisting of verb+auxiliary, verb+verb+auxiliary verb the last verb and auxiliary verb are dropped. Examples follow

21. ó khaṛā ho gayā hai 'he has stood up'
ó khaṛā nai^{n} hoyā 'he has not stood up'

or

ó nai^{n} khaṛā hoyā 'he has not stood up'

6. 22. Negation in interrogative sentences

(*a*) kī ó āwegā? 'will he come?'
kī ó nai^{n}/na āwegā? 'will he not come?'

or

kī ó āwegā nai^{n}? 'will he not come?'

(*b*) ó āwegā na? 'he will come won't he?'
nāi^{n} na? 'no, isnt it?'

7. If the emphatic particle *hī* is following the main verb the negative marker is placed after or before hī if hī is following the noun the negative marker is placed after *hī.*

ó *hī jāndā* hai 'he is going'
ó *hi nai^{n}* jāndā (hai) 'he is not going'

or

ó *hī nai^{n}* jāndā (hai) 'he is not going'
ó hī jāndā (hai) 'only he is going'
ó hī nai^{n} jāndā (hai) 'only he is not going'

8. In certain cases negation causes the ambiguity in the meaning e.g. ó khā ke naī/na sutā, may mean 'he went to sleep without having his meals' or 'he did not sleep after having his meals'.

9. It has been mentioned that in certain cases the negative marker can be placed before or after the main verb (section III) to find out what difference in meaning is brought about by changing its place needs more checking. It may emphasize negation,

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SOME ASPECTS OF NEGATION IN THADOU

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Thadou is a Kuki-Chin language of the Tibeto-Burman (sub) family spoken in Manipur Hills and adjoining areas. There are only three works which directly bear upon the grammatical studies of Thadou. The earliest work written specifically about Thado is by R. Stewart (1857). Stewart, who was a Lieutenant in the British Indian Army, gave an interesting but thumbnail sketch (or 'slight notice') of 'the grammar of Thadou or new Kookie language'. The second work is by Konow (Linguistic Survey of India, LSI, 1904). The LSI gave sketchy details about pronunciation and divided its grammatical notes into articles, nouns (gender, number and case), adjectives, numerals, pronouns and verbs (tenses, participles, voice, compounds, causatives, negatives and interrogative particles). This was definitely an improvement on Stewart (1857). The last one was by T. C. Hodson (192?). Hodson's work is exclusively a grammatical monograph and gave more linguistic information than any of the other two. However none of these can be considered comprehensive enough to give a systematic account of Thadou grammar.

2. On the basis of their scope, the negatives in Thadou may be classified into two major types. These are sentence negation and non-sentence negation types. The scope of the sentence negation type is over the whole sentence and in the case of non-sentence negation type, it is over a phrase or a single word only.

3. The sentence negation type is further classified into two subtypes, namely imperative and non-imperative. This classification is based on the distribution patterns of the negative particles involved; i.e., the imperative negative particle occurs only in the imperative sentences whereas the non-imperative particles occur in non-imperative sentences only.

4.1 Let us now consider the imperative sub-type. Compare the following two sentences:

(1) cithi-hi zihdoh in
letter-object marker to copy imperative particle
Copy (this) letter.

(2) cithi-hi zihdoh hih in
letter-object marker to copy not imperative particle
Don't Copy (this) letter.

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The negative particle is *hih* and this is inserted between the main verb and imperative particle *-in*. In Thadou the qualifiers of the main verb do not precede it but follow the main verb. And a number of qualifiers (usually—not exceeding three) can follow and qualify the main verb. Hence we would say that the imperative negative particle *hih* should immediately precede the imperative particle *-in*.

4.2 As stated earlier the imperative negative particle does not occur with any other sentence types than imperative ones. However *LSI* states (page 68) that 'the negative particle is *hi;* thus, *kein ka-nūm-hi-ē ka-ti-hi-e* 'I wish not I said not'; *hung-hi-in* 'do not come'. Another negative is *poi;* thus *a-hi-poi*, 'it is not', 'no'; *ni-pe-poi*, 'thou gavest not'; *a-num-ta-poi*, he wished not; *kai-chē-po-ng-e* 'I will not go'. A third negative, *lo* or *lou* occurs in *a-fa-lo* 'good-not', bad; *mighi-lon*, 'bad, etc.'

4.3 Apparently there is some kind of inconsistency or confusion in the statements and examples found in *LSI* about the negative particles of Thadou.

First of all, in the passage quoted above note the emphasis *the* on *hi*. There are only three references other than the one quoted above in Kuki-Chin section of the volume about the negative particles of Thadou. These are as follows:

(*a*) There are apparently many negative particles (in Northern Chin sub-group of Kuki-Chin group). Thado has *lo* and *poi* (page 8).

(*b*) The negative *lo* which is used in Thado, Paite, Lushei, Zahao, Lai Banjōgī, Pānkhū and Mhār is identical with the *loi* of Meithei, Rāngkōl and the *lai* of Langrong (page 19).

(*c*) The suffix of the negative imperative is *hi-in*; thus *lhai-hi-in*, 'don't runaway'; *yu-kam-hi-in*, 'don't get drunk' (page 66).

Thus in the reference (*a*) which lists the negative particles, Konow fails to mention the imperative negative *hih*, which he, however does in the reference (*c*). This reference (*c*) gives *hi-in* as the imperative negative particle, but Konow does not stick to this form as the imperative negative particle. He shortens the same into *hi* and presents this as *the negative particle* in the section dealing with the details of Thadou grammatical structures (page 68, quoted earlier).

Altogether Konow gives four examples to illustrate the use of negative particle *hi* or *hi-in*. Of these four examples three are imperative sentences and only one is a non-imperative sentence. This example of a non-imperative sentence is taken from Specimen I of Thadou, a translation of the story of Prodigal Son in Bible, translated and supplied by one Babu Bisharup (1899) who was apparently a Manipuri/Meithei speaker.

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All these points make one doubt the validity of Konow's suggestion that the negative particle *hi* occurs in all the sentence types, i.e., *hi* occurs in non-imperative sentences also. However the meagre data on hand will not allow us to come to any definite conclusion.

5.1 The second sub-type of sentence negation has its scope over non-imperative sentences. We will divide the non-imperative sentences further into two groups. These are copula or assertive group and non-copula group. The copula sentences have —*ahi* as copula/assertive particle which occurs in the sentence final position. The negative particle used in both the groups is -*po*- only, but the conditions of its occurrence are, however, different.

5.2 Consider the following sentences:

(3) kipi-n la a-sah-thei po-e
parrot-by song its-make-can not Number (singular)
The parrot can not sing.

(4) ka-mihilpu toh ka-kitoh
my teacher with my-agree
po-e
not Number (singular)
I do not agree with my teacher.

(5) tunin ama a-lum po-e
today he his-sleep not Number (singular)
He does not sleep.

(6) ken ca:ŋLah ka-nei-po-e
I/by me bread my eat not Number (singular)
(roṭṭi)
I do not eat bread (roṭṭi).

Note that in the above non-copula group of sentences the negative particle occurs immediately before the singular number particle.

Incidentally note that one of Konow's negative particles is *poi* and not *po*. The actual composition of *poi* is only *po-e* where -*e* is the singular number particle which by a morphophonemic rule becomes a glide. This proposition is confirmed by the following pairs of sentences:

7. (*a*) tunin ama a-lum-e
today he his-sleep Number (singular)
(*b*) tunin amaho a-lum-uve
today they their-sleep Number (plural)

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(*c*) tunin ama a-lum-po-e
today he his-sleep-not Number (singular)

(*d*) tunin amaho a-lum-po- (u) ve
today they their-sleep-not Number (plural)

8. (*a*) ken caŋLah ka-nei-je
I/by me bread my-eat Number (singular)

(*b*) keihon ca:ŋLahho ka-nei-juve
we/by us bread our-eat Number (plural)

(*c*) ken ca:ŋLah ka-nei-po-e
I/by me bread my-eat-not Number (singular)

(*d*) keihon ca:ŋLahho ka-nei-po- (u) ve
we/by us bread our-eat-not Number (plural)

5.3 In copula or assertive group of sentences, the negative particle *po* occurs immediately after the copula particle—ahi and is immediately followed by the number particle.

Consider the following sentences:

13. (*a*) cihi naŋma na-saha:u ahi
this you your-bag Copula
This is your bag.

(*b*) cihi naŋma na-saha:u ahi-po-e
This you your-bag Copula not Number (singular)
This is not your bag.

(*c*) hiceho naŋma na-saha:uho ahi-uve
these you your-bags Copula Number (plural)
These are your bags.

(*d*) hiceho naŋma na-sahauho ahi-po-(u) ve
these you your-bags Copula-not Number (plural)
These are not your bags.

In the above examples the negative particle *po* occurs in between the copula/assertive particle and the number particle.

However note that a singular positive copula type of sentence does not have any number explicitly marked. For this let us compare once again 13 (*a*) which is a singular positive sentence with 13 (*c*) which is a plural positive sentence:

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13. (*a*) cihi naŋma na-sahau ahi
this you your-bag Copula
13. (*c*) hiceho naŋma na-sahauho ahi-uve
these you your-bags Copula Number (plural)

Here we find no specific particle to indicate singular number in 13 (*a*) and thus we would propose that singular number is unmarked in the positive sentences of copula/assertive group.

Now, compare 13 (*a*) which is a singular positive sentence with 13 (*b*) which is a singular negative sentence:

13. (*a*) cihi naŋma na-saha:u ahi
this you your-bag Copula
13. (*b*) cihi naŋma na-saha:u ahi-po-e
this you your-bag Copula-not Number (singular)

Here we find a specific particle in 13 (*b*) to indicate singular number and this occurs in the sentence final position. Thus we would propose that singular number is marked in the negative sentences of copula/assertive group.

Compare also 13 (*c*) which is a positive plural sentence of copula group with 13 (*d*) which is a negative plural sentence of copula group. Here we find that in both the cases the plural particle occurs.

The following examples further exemplify the unmarked nature of the positive copula/assertive group of sentences in the singular.

14. (*a*) cuce pojncu a-jeŋjem ahi
that dress its-yellow Copula
That dress is yellow.
(*b*) cuce poncu a-jeŋjem ahi-po-e
that dress its-yellow Copula-not Number (singular)
That dress is not yellow.
(*c*) xuceho ponhocu a-jeŋjem
those dresses their-yellow ahi-(u) ve Copula Number (plural)
Those dresses are yellow.
(*d*) xuceho ponhocu a-jeŋjem ahi-po-(u)
those dresses their-yellow ve Copula not Number (plural)

6.1 The particle used to express non-sentence negation is *lou* and its scope is over a phrase or a word only.

6.2 Consider the following sentences:

(15) na-hasim lou-le na-fail-diŋ-ahi
your-read not-if your-fail-will-Copula
If you don't read, you will fail.

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(16) ahi-lou-le, ama a-ce-diŋ-ahi
is-not-if, he-his-go-will-Copula
If not (otherwise) he will go.

Note that in the above two examples the negative particle *lou* negates the sentence initial phrases only; the sentences remain unaffected. Note further that these sentences do not require singular number marked as in the case of sentences which contain *po* as the negative particle.

6.3 The word negation helps to coin contradictory terms in Thadou. Consider the following examples:

a-pha *apha-lou*
good good-not, not good
aphacom *aphacom-lou*
essential essential-not, not essential
ahoi *ahoi-lou*
nice nice-not, not nice

In the above examples we find that the addition of *lou* to the adjectives gives us corresponding contradictory terms.

7. *Summary:* We find that there are three negative particles in Thadou. These are *hih*, *po* and *lou*. The negative *hih* occurs only in imperative sentences and hence we call it as imperative negative particle. The negative *po* occurs in non-imperative sentences and it should always be followed by number particle (singular or plural).

We find also that in the copula group of sentences, copula/assertive particle should immediately precede this negative particle. Furthermore we find that, taken together these two particles account for sentence negation in Thadou and that non-sentence negation is expressed by the particle *lou*. The scope of this particle is over a phrase or a word. We find also that the occurrence of this negative particle does not require a sentence to be marked for singular number.

However there are several points which did not receive our attention here because of lack of data. One such point is about the role of negative particles, especially *lou*, in the interrogative sentences. It is proposed to investigate these points at a later date.

References:

Hodson, T. C. 192? *Thado Grammar*, Shillong.

Konow, Sten, 1904. *Linguistic Survey of India*, Vol. III, Part III. General Editor G. A. Grierson.

Stewart, R. Lt. 1857. *A slight Notice of the Grammar of the Thadou or new Kookie Language*, Journal of the Asiatic Society of Bengal, Vol. XXV, 178ff.

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NEGATIVE TRANSFORMATIONS IN SINDHI

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In this paper an attempt is made to describe negative transformations in Sindhi. Particular transformations stated are not necessarily adequately formulated.

1.0 Declarative sentences:

1.1 The transformations (T) listed here will be defined for the simplest structures of their argument sentences. The general structure of declarative sentences (Sd) in Sindhi is as follows:

N V—ramU əce tho 'Ram comes'.

N N_+ V—ramU naṭIkU DIse tho 'Ram sees a play.'*

N represents 'subject string', N_+ 'object string' and V 'verbal string.'

1.2 The order of strings in a sentence (S) is quite flexible. N, N_+ and V strings can occur in different positions in S. Initial string in S, usually, indicates prominence.

V N N_+—DIse tho ramU naṭIkU

N_+ V N—naṭIkU DIse tho ramU

1.3 A V—string consists of one or more verbs. Auxiliary verb is symbolised V_x and other verbs of the string as V_a, V_b, etc.

ramə naṭIkU DItho 'Ram saw a play' V—V_a

ramU naṭIkU DIse tho 'Ram sees a play' V—V_a V_x

ramU naṭIkU DIsi səghyo 'Ram could see a play' V—V_a V_b

ramU naṭIkU DIsi səghyo pye 'Ram could have seen a play.' V—V_a V_b V_x

1.4 The order of V_x is flexible in S. V_x can occur in any non-initial position of S. The string or the part thereof of preceding V_x usually connotes prominence in S.

*B, D, J, and G are implosives.

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mã tho əJU naṭIkU DIsi əcã 'I'm going to see a play today.'
mã əJU tho naṭIkU DIsi əcã
mã əJU naṭIkU tho DIsi əcã
mã əJU naṭIkU DIsi tho əcã
mã əJU naṭIkU DIsi əcã tho

2.0 Negation of declarative sentences:

2.1 Usually S is negated by placing a negative—marker (G) before V—string or in the middle of V—string.

TG 1: $G; N N_+ V \rightarrow N N_+ G_1 \ldots V$

ramU naṭIkU nə DIsi səghyo 'Ram could not see the play.'
ramU naṭIkU DIsi nə səghyo

2.2 When a V—string contains V_x, G_1 occurs before V_x or before connectors—tə 'that', bI 'also', i 'even' (C_1)—and V_x i.e. $C_1 V_x$. In a negative sentence (S_g), final V_x is shifted in pre-final position.

TG 1_a: $G; N N_+ V_a V_x \rightarrow N N_+ G_1 V_x V_a$
$G; N N_+ V_a C_1 V_x \rightarrow N N_+ G_1 C_1 V_x V_a$
ramU naṭIkU nətho DIse
ramU naṭIkU nə bI tho DIse 'Ram doesn't also see the play.'

2.3 $G_1 V_x$ can optionally occur in the initial position of S as well.

TG 1_b: $G; N N_+ V_a V_x \rightarrow G_1 V_x N N_+ V_a$
nətho ramU naṭIkU DIse

2.4 When a particular string or a part of the string is to be specifically negated, the neg. marker follows that string or the part thereof.

TG 2: $G; N N_+ V \rightarrow N G_1 N_+ V$
$N N_+ V G_1$

ramU konə naṭIkU DIsəndo '*Ram* will not see the play.'
ramə naṭIkU DIṭho konə 'Ram did not *see* the play.'

2.5 The neg. markers occurring in TG 1 and TG 2 are as follows:

G 1: nə 'specific negation'—'no, not.'

konə (mas.)
kanə (fem.)
} 'general negation'—'not such.'

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kinə 'emphatic negation'—'never.'
ramU indo 'Ram will come'
ramU nəindo 'Ram will not come (specific).'
ramU konə indo 'Rama will not come (general).'
kəmla kanə indi 'Kamla will not come (gen).'
kəmla kinə indi 'Kamla will never come.'

In present colloquial speech, the distinct connotation of these neg. markers is in a fluid stage and these freely very among themselves. But in literary dialect, attempt is made to retain these distinctions.

2.6. G_1 occurring before III present tense—ahe 'is', ahIn 'are' (root hUəṇU 'to be') are combined in one as the result of *external sandhi.*

nə ahe → nahe 'is not'
konə ahe → konhe 'is not'
kanə ahIn → kanhən 'are not'
kinə ahIn → kinhən 'are not'

2.7. In the negative transformation (TG) of S beginning with a certain connector—C_2, G occurs usually in the initial position.

TG 3_a: $G; C_2 N N_+ V \rightarrow G_2 C_2 N N_+ V$

tə mã ghər həlyo vendUs 'Then I shall go away to my place.'

nətə / nətətə mã ghər həlyo vendUs 'Otherwise I shall go away to my place.'

(i) In this T only one neg. marker—nə (G_2) can occur.
(ii) Connectors of this class (C_2) can be listed as under:
tə 'then', vəri 'again', poI 'after', etc.
(iii) nətə and nətətə freely vary.

2.8. The negation of S beginning with certain adverb—kUjhU 'partly', ghəṇo 'mostly' (D_a)—also places G_3 in the initial position, replacing D_a.

TG 3_b: $G; D_a N N_+ V \rightarrow G_3 N N_+ V$

kUjhU pəchtayo əthəm 'Partly I have repented.'
nəki pəchtayo əthəm 'Nor I have repented.'

2.9. The negation of S beginning with adverb—ko (m.), ka (f.), ki (general) 'probably that' (D_b)—adds G_3 initially along with D_b.

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TG 3_c: G; D_b N N_+ V → G_3 D_b N N_+ V

ko tũ ghər ayo hUe 'Probably (either) you had come home.'

nəko ko tũ ghər ayo hUe 'Neither you had come home.'

G_3 represents nəko (m.), nəka (f.) nəki (gen.) neg. markers.

2.10. The order of these connectors (class C_2) and adverbs (a and b) in S is quite flexible. C_2 (with or without G) can occur after any string in the S as well. D_a and D_b (with or without G) can occur only after any non-final string.

N G_3 C_2 N_+ V—mã nə tə ghər vendUs
N N_+ V G_3 C_2—mã ghər vendUs nə tə.
N G_3 N_+ V—mũ nəko pəchtayo ahe
N N_+ G_3 D_b V—tũ ghər nəki ki ayo hUe

3.0 Negation of Imperative sentences:

3.1. The negation of simple and future imperative sentence (S_i, S_f) is similar to that of declarative sentence (TG 1 and TG 2) with following limitations:

(i) TG 1_a and TG 1_b do not operate in imperative transformations.

(ii) N—string can be deleted optionally.

3.2. TG 4: It operates in the same fashion as TG 1.

TG 4_a: G; (N) N_+ V_i → (N) N_+ G_2 . . . V_i

TG 4_b: G; (N) N_+ V_f → (N) N_+ G_4 . . . V_f

(tũ) kItabU khəṇi nə vəñU 'Don't take away the book.'

(tũ) kItabU khəṇi mətã vəñi 'You shouldn't take away the book.'

Here V_i represents 'Imperative' and V_f 'future Imp.'

3.3. TG 5: It denotes specific negation. It operates in the same fashion as TG 2.

(N) N_+ V → (N) G N_+ V ¦ V=V_i or V_f
(N) N_+ V G ¦ G=G_2 or G_4

kItabU khəṇU nə
nə kItabU khəṇU
kItabU khəṇi mətã
mətã kItabU khəṇi

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3.4. In S_f, G_4—'mətã' occurs in initial position before N—string as well. 'nə' does not occur in this position.

TG 5_a: $G; N\ N_+\ V_f \rightarrow$ mətã $NN_+\ V_f$
mətã tũ ghər vIhĩ 'You shouldn't sit at home.'

3.5. In S_i only one neg. marker—nə (G_2) occurs. In S_f, 'nə' and 'mətã' (G_4) occur in TG 4_b and only 'mətã' occur in the final position of TG 5 and in the initial position before N—string (TG 5_a).

The connotation of these neg. markers is as follows:
G_2—nə 'general order'
G_4— { nə 'general advice'
mətã 'forbidance'

3.6. ňə (ňi) mətã with weak stress, denoting adverb of doubt 'possibly, if, well' also occur in imperative sentences and contrast with negative 'nə' and 'mətã' (with stress).

Barə nə mətã əcən	'Well, possibly children may come.'
Barə ne mətã əcen	'Well, children should not come.'
Barə nə khain	'Children might eat.'
Barə nə khain	'Children should not eat.'

4.0 Interrogative sentences:

4.1. Any S_d and S_f can be transformed into 'yes or no' question (S_q) by replacing falling terminal contour ↓ with rising terminal contour ↑.

TQ 1: $Q; S \downarrow \rightarrow S \uparrow$
tũ Iskul vende ↓ 'You will go to school.'
tũ Iskul vende ↑ 'Would you go to school?'

4.2. For transforming interrogative sentences other than S_q (symbolised S_Q), question-marker (Q) is placed usually in the initial position of S_d or S_f (affirmative or negative). In such case V_x of S_d shifts to pre-final position. When specific interrogation is about particular string or a part of the string, Q occurs after that string or part thereof.

TQ 2: $Q; S \rightarrow Q. . . . S$
$Q. . . . N\ N_+\ V_x\ V_a$
tũ paṇi pĩ tho 'You drink water.'
tũ cho paṇi tho pĩ 'Why do you drink water?'

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4.3. In a S_d with V_x, final string question-marker—cho 'why' occurs along with V_x.

TQ 2_a: Q ; N N_+ V_a → N V_a N_+ Q V_x
tũ pĩ paṇi cho tho

5.0 Negation of interrogative sentences:

5.1. For negation, S_q operates in the same manner as S_d (TG 1, TG 2 and TG 3) with following additions:

5.1. In S_q or negative S_q, a neg. Q-marker—'kinə' 'or not' (G_5) occurs in different positions of the sentence.

TG 6 ; G ; S_q → G_5 . . . . S_q
kinə to xunnə kəyo ↑ 'Or didn't you kill ?'

5.2. Final nə ↑ (with rising terminal contour) can be added in place of falling terminal contour ↓ to any S_d, S_i or S_f (affirmative or negative) with the connotation of persuasion (Please, don't you agree?) or annoyance (Don't you listen?) in imperative S and confirmation (Isn't it?) in declarative S. nə ↑ is symbolised G_6.

TG 7: G; S → S G_6
hu Iskul nə vyonə ↑ ———'Isn't that he didn't go to school?'
nə BUDU nə ↑ 'Please, don't you listen that don't drown yourself?'

5.3. S_Q with Q-marker cho 'why' only can be negated. Neg. marker G_1—nə, kinə, konə, kanə—is added after cho.

The interrogation of only affirmative S_d can be negated, whereas the interrogation of neg. S_f (S_{fg}) can also be negated.

TG 8: G; cho . . . . S_d → cho G_1 . . . . S_d
G; cho . . . . S_{fg} → cho G_1 . . . . S_{fg}
tũ chonə ghər tho vəñi 'Why don't you go home?'
chonə əJU əsĩ naṭIkə te nə həlũ 'Why shouldn't we drop going to the play today ?'

5.4. The interrogation of S_Q with Q-markers other than 'cho' is not negated. Instead ñə with weak stress, denoting exclamation, unaccountability, can be added after Q in such sentences. Here ñə ; S_Q contrasts with Q; S_g

chokri kəhṛi ñə sUhṇi a 'What a beautiful girl !'
xəmisə kəhṛi nə phaṭələ a 'Which shirt is not torn ?'

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6.0 Conjunctive sentences:

6.1. Two sentences of same class (S_d, S_i, S_f, S_q, S_Q) are combined by placing conjunction (C_j)—ɛ̃ 'and', yã 'or'—in between two sentences.

TC 1: $C_j ; S_1 ; S_2 \rightarrow S_1\ C_j\ S_2$

ramU dIliə vendo ɛ̃ mohənU pune indo 'Ram will go to Delhi and Mohan will come to Poona.'

6.2. Common strings or parts of strings S_1 and S_2 are optionally deleted after C_j.

$N_1\ N_{+1}\ V_1\ C_j\ (N_1\ N_{+1})\ V_2$

kəmla kəpṛo vəṭhəndi yã kəmla kəpṛo DIsəndi

= kəmla kəpṛo vəṭhəndi yã DIsəndi

'Kamla will either buy or see the cloth.'

7.0. Negation of Conjunctive sentences:

7.1. For negating a conjunctive S (S_c) with conjunction ɛ̃ or yã, a neg. marker G_7 is placed usually in the initial position and the same or another neg. marker of G_7 replaces C_j. For specific connotation initial G_7 can shift after any string or a part of the string.

G_7 class includes nə, nəko, nəka, nəki neg. markers.

TG 9: $G ; S_1\ C_j\ S_2 \rightarrow G_7 \ldots S_1\ G_7\ S_2$

ramə pɛsa nəki DIna nəki vərta 'Ram neither gave nor took money.'

7.2. For negating interrogative S_c, the interrogative conjunct (C_q) yã 'OR?' is replaced by neg. Q-marker (G_5) kinə 'or not?'

TG 10: $G ; S_1\ C_q\ S_2 \rightarrow S_1\ G_5\ S_2$

ramə kItabU pəṛhyo yã rUGo DIṭho 'Did Ram read or only see the book?'

ramə kItabU kinə rUGo DIṭho 'Whether or not Ram read the book or only saw the book?'

sitã kəpṛo vəṭhəndi kinə nə (vəṭhəndi) 'Whether or not Sita will buy the cloth or not?'

8.0 Combination of affirmative and negative sentences:

8.1. Aff. S and neg. S (S_a, S_g) can be combined according to TC 1 with ɛ̃ 'and', yã 'or'. This transformation is further shortened by placing G_2—nə—along with the uncommon portion of S_g, after S_a.

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TC 2: C_j; S_a; $S_a \rightarrow S_a\ G_2\ S_g$
to naṭIkU ḍitho; mũ naṭIkU nə DItho
to naṭIkU Ditho nə mũ 'You saw the play not I.'

8.2. When S_2 is only the negation of S_1 i.e. S_{g1}, the negated V—string or a neg. marker (G_g) əlae nə 'don't know whether' is placed after S_1.

TC 2_a: yã; S_1; $S_{g1} \rightarrow S_1\ V_g$
$S_1\ G_g$
tokhe naṭIkU vəṇe nə vəṇe 'You may like the play or not.'
tokhe naṭIkU vəṇe əlae nə

8.3. When S_g and S_a are combined by the conditional conjunct (C_c) tə 'if.... then', C_c along with the positive element of S_a, is placed within S_g after nə (G_2).

TC 3: C_c; $N_1\ G_2\ N_+\ V$; $N_2\ N_+\ V \rightarrow N_1\ G_2\ C_c\ N_2\ N_+\ V$
ramU ghər nə hundo tə gopalU (ghər) hundo
ramU nə tə gopalU ghər hundo 'If not Ram, Gopal would be at home.'

8.4. When the conditional string is adverb or indefinite pronoun, tə (C_c) is optionally deleted.

TC 3_a: hu əJU nə indo tə sUbhã indo
hu əJU nə sUbhã indo 'He will come, if not today, tomorrow.'

8.5. When the conditional string is an indefinite pronoun—kUjhU 'something', ki 'something', ko 'some one (m.)', ka 'some one (f.)' and the same pronoun occurs in S_1 and S_2, pronoun of S_1 is followed by nə (G_2) and again the same pronoun.

TC 3_b: C_c; $P\ G_2\ N_+\ V$; $P\ N_+\ V \rightarrow P\ G_2\ P\ N_+\ V$
ko nə mIṭhai khaindo tə Byo ko khaindo
ko nə ko mIṭhai khaindo 'Some one or other will eat the sweets.'

8.6. nə occurs as conditional conjunct (C_c) as well and denotes the meaning 'when, if'.

ramU nə pəṛhəndo tə zərur pas thindo 'If Ram studies, he will certainly pass.'
mã nə ghIṛyUs tə mũ kəmla khe DIṭho 'When I entered, I saw Kamla.'

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9.0 Independent negative occurrences:

9.1. The order of neg. markers occurring independently can be listed as under:

(1) mUkhe kItabU De nə ↓ 'No'
'Give me the book.'

(2) tũ vəñi ghər aram ker nəko ↓ / nə ↓ 'Not that'. 'No I can't do'.
'You go home and rest.'

(3) hu Daḍho sUṭho maṇhu ahe nə nə ↓ 'No, no, (I don't agree.)'
'He is a very good person.'

(4) tũ əJU əsã vəṭI mani khaU nə nə nə ↓ 'No, please (don't press me)'
'You dine with us today.'

(5) tũ šagIrdən sã səxti kər hərgIz nə ↓ 'No, never.'

(6) ramU jəpan nətho vəñe nə ↑ 'No. Is it?'
'Ram is not going to Japan.'

(7) tũ hIkə DəBroṭi tə vəthi əcIjãI bəs nə ↑ 'That's all. Is it?'
'Please bring a loaf.'

Other emphatic adverbs (D_c) can also occur in place of hərgIz in sentence 5. bIlkUl, səfa, asUl, kəDəh.

APPENDIX

Inventory of the symbols used

C_c	Conditional conjuncts : tə, nə
C_j	Simple conjuncts : ɛ̃, yã
C_q	Interrogative conjunct : yã
C_1	Connectors : tə, bI, i
C_2	,, : tə, vəri, poI etc.
D_a	Quantifying adverbs : kUjhU, ghəṇo
D_b	Adverbs denoting possibility : ko, ka, ki
D_c	Emphatic adverbs : hərgIz, bIlkUl, səfa, əsUl, kəDəh
G	Negative marker
G_1	TG 1, 1_a, 1_b, 2 and 8 : nə, konə, kanə, kinə
G_2	TG 3_a, 4_a, and 5 : nə
G_3	TG 3_b, and 3_c : nəko, nəka, nəki
G_4	TG 4_b, 5, and 5_a : nə, mətã

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G_5	TG 6 and 10 : kinə
G_6	TG 7 : nə ↑
G_7	TG 9 : nə, nəko, nəka, nəki
G_8	TC 2_a; əlaene
N	Subject string
N_1	First N—string in a transformation
N_2	Second string in a transformation
N_+	Object string
P	Indefinite pronouns : ko, ka, ki, kUjhU
Q	Question-marker
S	Sentence
S_a	Affirmative sentence
S_c	Conjunctive sentence
S_d	Declarative sentence
S_f	Future imperative sentence
S_{fg}	Negative S_f
S_g	Negative Sentence
S_i	Simple imperative sentence
S_q	'yes' or 'no' question
S_Q	Interrogative sentence other than S_q
S_1	First sentence in a transformation
S_2	Second sentence in a transformation
T	Transformation
TC	Conjunct transformation
TG	Negative transformation
TQ	Interrogative transformation
V	Verbal string
V_a, V_b	non-auxiliary verbs in one string
V_f	Future imperative
V_g	Negated verb
V_i	Simple imperative
V_x	Auxiliary verb
V_1	First verbal string in a transformation
V_2	Second verbal string in a transformation

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Section 2

PAPERS PRESENTED BY REGISTRANTS AND COMMENTS ON ONE OF THEM

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PRONOUNS IN GADE LOHAR DIALECT

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1. Introduction

Gade Lohar is the name of a Community and the name of their speech has been given as *Gade Lohar Dialect*. These people are wandering blacksmiths. They are found in Rajasthan, Gujrat, Madhya Pradesh, Western Maharastra, Uttar Pradesh, Delhi, Haryana and Punjab States. They are identified with different names at different places i.e., are named as Gaḍuliya Lohars, Lohpiṭṭa Rajput Lohars, Bagṛi Lohars, Bhubaliya and Gade Lohars. These people move in groups with their carts (which are specially designed) from one place to another and work in iron and also trade in bullocks. Bullocks and carts are their main possessions with the help of which they move. They are nomads. These people also claim that they are descendents of Maharana Pratap Singh and they are Rajputs. Their way of dressing and their customs show that they have come from Rajasthan and might have been descendents of Maharana Pratap Singh. My analysis is restricted only to a group of Gade Lohars, who move around Delhi. I have been meeting these people for the last two years, and my aim of presenting this paper is to bring to light some aspects of an Indo-Aryan dialect so far not described.

2. Pronouns

Syntactically Pronouns in Gade Lohar Dialect occupy the same position as the nouns and show relationship with nouns and verbs. In the dialect under consideration the pronouns are inflected for case and number like nouns. Pronouns lack the vocative whereas in the case of nouns and adjectives the post positions are easily segmentable. The pronouns and post positions are fused together. There are three classes of pronouns:

(*i*) Personal Pronouns.
(*ii*) Interrogative Pronouns.
(*iii*) Relative Pronouns.

All these pronouns are inflected for two numbers (singular and plural) and two cases (direct and oblique). The oblique occurs with post positions like the agentive marker *-e*, object marker *nəe*, and the possession marker */-r-/*.

The personal pronouns distinguish three persons. The third person pronouns show a further distinction between remote and proximate. They may be called demonstrative pronouns also.

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All the pronouns are listed below with examples. It will be found that the oblique frequently shows two forms of which the first occurs with *-e* and the second occurs with *nəe* and *-r-* whenever the direct shows two forms they may be taken to be in free variation.

Before proceeding to list the pronouns, it may be useful to mention a few morphophonemic rules which enable the reader to understand some of the forms.

(*i*) ə+e→ *əe*
(*ii*) əe+i→əi
(*iii*) m and n are germinated between two vowels.

First Person

		Singular	Alternant with Plural
Direct		hu^{n}	əmme
Oblique	(*i*)	mə-	əmm-
	(*ii*)	mha-	əmma-

Examples: *hu*^{n} khau^{n} chu^{n}. 'I eat'

əmme rate uvəe^{n} gIya
'We went there yesterday'
nəe chokra nəe kuṭyu^{n} həttu^{n}
'I beat the boy'
a *mhari* gay chəe 'This is my cow'
əmme pani piddhU^{n} həttU^{n} 'We drank the water'
a *əmmaro* bhai chəe 'This is our brother'

Second Person

		Singular	Alternant with Plural
Direct		tu^{n}	təmme
Oblique	(*i*)	tə^{n}-	təmm-
	(*ii*)	tha-	temma-

Examples:

tu^{n} kam keri rIyo chəe 'you are working'
təmme rate kya^{n} gIya hetta 'where did you go yesterday'
təe kam kəryu^{n} chəe 'you have done the work'
a *tharo* macco chəe 'this is your cart'
təmme a kam kəryu^{n} 'you did this work'
təmmaro bhai kya^{n} chəe 'where is your brother'

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Third Person

Remote

		Singular	Alternant with Plural
Direct		O	O (ϕ is the plural)
Oblique	(*i*)	uṇ-	
	(*ii*)	O-	uva^{n}

Examples:

O jai rIyo chəe 'He is going'
O həgḷai^{n} jai rIya chəe 'They all are going'
Uṇe a kam kəryu^{n} 'He did this work'
oro bhai jai rIyo 'His brother is going'
uva^{n}e a kam kəryu^{n} 'They did this work'

Proximate

		Singular	Alternant with Plural
Direct	(*i*)	a	
	(*ii*)	i	əe
Oblique	(*i*)	iṇ-	
	(*ii*)	əe	iya^{n}

Examples:

a ghoṛo mharU^{n} keyyu^{n} mannəe chəe 'This horse is obedient to me'
i chokri həkhri chəe 'This girl is good'
əe chokərIya^{n} ləṛi rəiya^{n} chəe 'These girls are quarrelling'
iṇe chokrae kəyyu^{n} 'This boy said'
əe ghoṛa nəe paṇi pai lya 'Take this horse for drinking water'
iya^{n}e chokra^{n}e kəyyu^{n}. 'These boys said'

Interrogative Pronoun

Human

		Singular	Alternate with Plural
Direct		kUṇ	kUṇ
Oblique	(*i*)	kin	
	(*ii*)	kəe	ki-

Examples:

kUṇ avyo chəe 'who has come'
kUṇ avya chəe 'who have come'
kiṇe a kam kəryu^{n} 'who did this work'
a ṭabər *kəeru^{n}* chəe 'whose child is this?'
kiya^{n}e uva^{n}nəe kuṭya 'who beat them?'

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Non Human

	Singular	Alternant with Plural
Direct	chu^{n}	chu^{n}
Oblique	chəe	chəe

Examples:

a *chu^{n}* chəe 'what is this?'

əe *chu^{n}* chəe 'what are these?'

ripiya *chəe* məe chəe 'In what the money is?'

mhara cyar kuṛta chəe upper chəe 'On what my four shirts are?'

Relative Pronoun

	Singular	Alternant with Plural
Direct	jo	jo
Oblique	(*i*) jiṇ	
	(*ii*) jəe	jiya^{n} -

Examples:

jo a^{n} kam kərəe chəe o mharo bhai chəe '(The person) who works here is my brother'

jo a^{n} kam kərəe chəe ohəgḷa^{n}i mhara bhai chəe '(The persons) who work here they all are my brothers'.

jiṇe a kam kəryu^{n} o mharo bhai chəe '(The person) who did this work is my brother'.

hu^{n} *jəenəe* hojto hotto o mənnəe koi laddhoni '(The person) whom I was searching did not meet me'.

jiya^{n}e a kam kəryu^{n} o həkhra admi chəe '(The persons) who did this work are nice'.

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THE LONGEST GOLD PLATE INSCRIPTION IN MALAYALAM

A Note on its Linguistic Aspects

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This paper is an attempt to bring out certain linguistic aspects of the longest gold plate inscribed in Malayalam characters. It contains a treaty between the Zamorins of Calicut and the Dutch East India Company in the year A.D. 1691. The text of the deed is based on the version published by K. Kunjunni Raja[1]. The original is kept in the India Office Library, London[2]. Dr Raja who published the document has not commented on the content or its linguistic peculiarities. He remarks 'I have copied this deed as I have found it. I have not attempted to correct even the obvious mistakes in the text. Even the meaning was not clear in certain passages. Therefore it is not unlikely that mistakes have crept into this copy'.[3]

The Malayalam language had acquired its distinctive features by about the 12th century and in this official document of the close of the 17th century we find it in a well developed form. The text of the neatly executed deed is praise worthy for its precise and matter of fact style and abundance of foreign loan words and colloquial expressions. The document is decided into eleven articles (Avastās).

1

The forms showing distinctive features in Malayalam are dealt with below. A number of loan words are used in this document.

Kompañi, a loan word is supposed to be a colloquial shift from the English word *Company*. It is really a direct loan from the old French language *kompaññi*. The same word is used in five different forms without changing this meaning. Since this word has got great significance in the history of Kerala[4].

landa is another loan word from the Dutch meaning Holland. The term Holland becomes *landa;* both *elanda* and *landa* are used in the text. Kunjan Nambiar, one of the ancient Malayalam poets of the 16th century

[1] K. Kunjuṇṇi Raja, 'Pontakitileḷutiya Caritra rekakal'. *Bhāṣāgavēṣaṇam*, Mangaḷodayam, Trichur, Kerala—1962, pp. 250-260.

[2] The details of the gold plate is as follows: Breadth 1 3/4", length: 80", weight 13 1/2 ounce. Dated A.D. 1691, November 16.

[3] *Bhāṣāgavēṣaṇam*, p. 251.

[4] Padmanabha Menon, K. P. 'Koccī rājya caritram'.

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used this word in his famous Tuḷḷal poems[5]. And also there are other words whose origin cannot be easily traced out. *Parādesijati* is a loan translation for 'foreign caste'.

2

Phonetic Changes

ai for *a:*

e.g. *Malaiyaḷam, caita*

c>s'

e.g., Vacakam>Vośakam, cālur>Śālur

d>s

e.g., anuvādam>anuvāsam

S>t

e.g., *sāmūtiri>tamūtiri*

a>aa

avvaṇṇam>auvaṇṇam>this initial *aa* is extremely rare in modern Malayalam and even in Tamil.

h>ϕ

e.g., *hetu>etu* the initial 'h' is dropped.

The influence of colloquial Malayalam is vividly reflected in the following expressions. periyaduromār>peyyaduromar; Urappau>uttappu nirbhagyam>narbhagyam; vipradipatti>viprōtti; kalmaṣam>kanmalam dośam>tośam; nirmmaryāta>nirmmaryāsa.

In *muḷiñu* for *muṣiña*, instead of retroflex *ṣ ḷ* is used. It is a peculiarity of Malayalam language.

3

Morphological peculiarities

e.g. 1. *kāriakkāranmār* means of the kings denotes the officers of the king double plural is employed to denote the grades of officers.

2. *naṭṭadaya* of the *naḍu, naḍu+udaya* for the singular genetive from the plural form is used.
3. rajyattinte of the country the singular genetive form is used.
4. 'Śarūpattingalin the royal family' Neuter gender suffix is employed.

[5] Sivasankara Pillai, P. K. Edited 'Kunjan Nambiyarute Tullal Kathakal' p. 226.

'landakkuḷalum toḷillpu ttoru' (naḷa caritam)

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Syntactical Peculiarities

The influence of Sanskrit construction is quite evident in the majority of sentences. The rule that the adjective and noun should take the same —(one ending) can be seen in the following constructions.

e.g., *Satrukkal paradēśikal* 'foreign enimies'.

4

Semantic Features

Kovilakam>koyilakom denoted in medieval Tamil, Temples only, but here original meaning of 'palace' has been retained.

indiayenna malankora—'India which is Malankara'—Malankara or Malabar, Synonymous for India as a whole.

This document throws some light on the history of kerala in the Dutch period. The word *Pathakku* is of historical importance and the name of the Dutch Coin *Aḷuvikkodu* is the place name now known as *Aḷikkodu* which is located near Cranganore in Trichur District. *Ayinikkuṭṭil Nambidi* was the famous Raja of the Cherulayam palace near Kunnamkulam. *ā ḷa diyar* means slaves (in general); the word is used in several occasions in the document.

This document disproves the widely held view of some native scholars that the inscriptional language fallows a set pattern and merits no detailed study. It is obvious to note that at the time of dictation some scribal errors have occurred in this document. In view of a linguist all those words need not be taken into consideration for a detailed study. Some old words (e.g., *erandu*) archaic forms, colloquial phrases (e.g., *uruttukondu*) etc., throw light upon the spoken language of the people. The phonetical, morphological and syntactial aspects of this document reveal the state of Malayalam language at the close of 17th century. This note is intended only to draw the attention of the scholars to the peculiarties of this most famous document.

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POSITION OF LAHNDA IN NORTH-WESTERN GROUP OF INDO-ARYAN LANGUAGES*

THAKUR DASS
(*New Delhi*)

Lahnda is an Indo-Aryan language. Like Sindhi, its speakers are scattered now in various parts of the country. It has certain pockets in the states of Haryana, Panjab, Rajasthan, Uttar Pradesh, Madhya Pradesh and in the Union Territory of Delhi. Before partition of the country (1947), Lahnda was spoken in the western part of undivided Panjab and North Western Frontier Province. Grierson, in his Linguistic Survey of India (Vol. VIII, Part I) has enumerated about twenty-two dialects of Lahnda. We may not go into such details and broadly divide it into two main varieties, taking salt ranges as the dividing boundary— North-Eastern variety and North-Western variety.

For the purpose of the present study, the North-Western variety has been used. The name of the dialect, whose data has been utilised is Bahawalpuri of which the author is a native speaker. This variety of Lahnda has withstood the forces of Linguistic acculturation due to its special phonological features.

Lahnda belongs to the North-Western group of Indo-Aryan languages. Grierson has classed it as a dialect of Panjabi and has named it as 'Western Panjabi'. Even after doing so, he, at places, is not clear if he treats Lahnda as a dialect of Panjabi or as a separate language with various dialects. Grierson's main argument for grouping Lahnda with Panjabi seems to be the retention of a similar features in both the languages. This is a feature of 'shared retention' of proto-geminates.

Synchronically, Lahnda attests similarities of phonological features both with Panjabi and Sindhi. The purpose of the present study is, therefore, to examine its closeness with Panjabi and Sindhi and to confirm or refute the assumption of Grierson and other scholars who followed, more or less, the same line of thinking. Kashmiri, though distantly related, has been chosen to give a greater time depth and to highlight the methodological implications.

The study is based on a data of 200 items (Morris Swadesh's list) with certain modifications. The synchronic data of the four languages has been collected by employing 'Informant Technique' and phonemicised.

*The present study is based on my M.Litt. dissertation entitled 'A Controlled Comparative Reconstruction of Kashmiri-Lahnda-Panjabi-Sindhi', submitted to the Department of Linguistics, University of Delhi, in partial fulfilment for the degree of M.Litt. in Linguistics in the year 1969. I like to record my sincere gratitude to Dr Bal G. Misra, who supervised my work and to Dr D. P. Pattanayak whose Ph.D. thesis 'A Historically Controlled Reconstruction of Oriya, Assamese, Bengali and Hindi' presented the guidelines for my study.

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The phonological elements of the proto-language have been reconstructed following the well-known methodology of Comparative Method. The inference drawn are strictly on the basis of data and the results achieved are tentative and subject to modifications with additional evidence.

The synchronic phonologies of the four languages, under study, have the following peculiar phonological features.

(1) Kashmiri attests three series of stops (voiceless unaspirates, voiced unaspirates and voiceless aspirates).

(2) Panjabi has also three series of stops (voiceless unaspirates, voiced unaspirates and voiceless aspirates) and three tones high-falling low-rising, and level tone).

(3) Lahnda and Sindhi have four series of stops (voiceless unaspirates, voiced unaspirates, voiceless aspirates and voiced aspirates) and a set of implosives/b d ɖ f and a series of five nasal consonants m n ɳ N ŋ.

We attest the following sets of correspondences as evidence for the reconstruction of implosives in the Proto-KLPS* phonology.

	K	L	P	S
(1)	—	b	b	b
(2)	b	B	b	B
(3)	d	D	d	D
(4)	d	d	d	d
(5)	—	D	ɖ	D
(6)	ɖ	ɖ	ɖ	—
(7)	dz	j	j	j
(8)	dz	J	j	J
(9)	g	g	g	g
(10)	g	G	g	G

Rigorously following the methodology of the comparative reconstruction, we could reconstruct five series of stops (including implosives) in the proto-language. By doing so, we have to posit 'merger' of implosives and plosives in the case of Kashmiri and Panjabi. This implies the retention of the proto-feature in Lahnda and Sindhi.

The other alternative could be to treat the items with implosives as a result of borrowing and to reconstruct only four series of stops in the proto-language, positing 'split' in the case of Lahnda and Sindhi. Though for the present data, the frequency criterian does not help us much to confirm our hypothesis, yet with more data, the hypothesis is more likely to be confirmed.

By following any of these hypotheses, the position of Lahnda does not change. In any case, it sub-groups with Sindhi and not with Panjabi.

*KLPS stands for the abbreviated form of Kashmiri-Lahnda- Panjabi-Sindhi.

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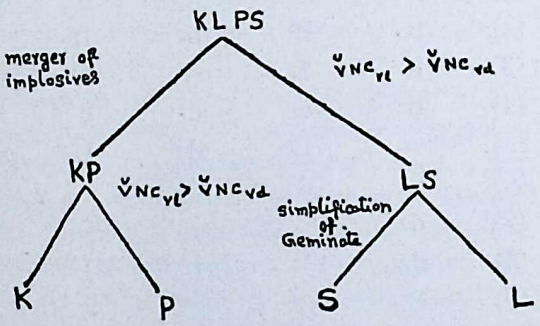
If we reconstruct five series of stops, which is methodologically valid, it results in conflicting sub-grouping. In this sub-grouping, Kashmiri and Panjabi form a sub-group and Lahnda and Sindhi another. The common innovation in the case of Kashmiri and Panjabi, thus, would be merger of implosives and plosives, whereas the other sub-group will retain the proto-feature. So far, there is no difficulty. When we further go into the phonological changes, we get that Panjabi separates from KP sub-group on the basis of voicing of proto VNC voiceless clusters. Kashmiri further innovates the deaspiration of the proto-voiced aspirates and many other individual changes. Panjabi also develops tonality. In LS sub-group, Sindhi separates from the sub-group on the basis of simplification of the proto-geminates whereas Lahnda retains that feature. But there is one important change, which is shared by Lahnda-Sindhi sub-group and also by Panjabi. This change is *VNC VI.>VNC vd. (pənc) */pənc/> /pənj/ in LPS and /pənts/ in Kashmiri. From the following family tree diagram the conflicting sub-grouping can be seen. There is repetition of a change which is shared by LS sub-group and by Panjabi also.



If we work on the second assumption, i.e., treating implosives in Lahnda and Sindhi as a result of the mechanism of borrowing, the sub-grouping is neat and not conflicting. Moreover, we don't have to repeat the changes in the successive splits.

The presence of the implosives in the synchronic phonologies of Lahnda and Sindhi also confirms the validity of this hypothesis. Moreover this hypothesis has been confirmed by the multiple reconstruction. Historically also, we don't get evidence for the presence of implosives in the proto-stage of Kashmiri and Panjabi. Thus it appears to be a later development and particularly restricted to LS sub-group. Thus on the basis of sets No. 2, 3+5, 8 and 10, plosives have been reconstructed, treating implosives to be a shared innovation of LS sub-group.

It may also be mentioned that initially this innovation does not entail structural change in the phonological system of both the languages. It is a case of phonemic re-adjustment. Later, as a result of borrowing

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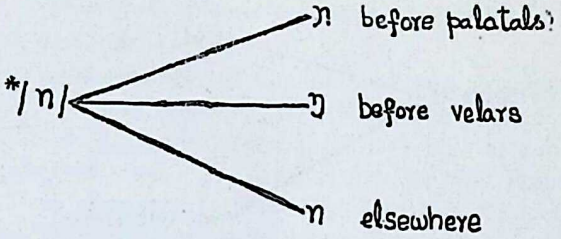
and other mechanism of change (other than sound change) contrasts develop between the plosives and implosives and the implosives acquire a phonemic status in the sub-group.

LS sub-group further innovates a series of five nasal consonants from the three proto nasals */m, n & ṇ/. The stages of this development can be shown as under:

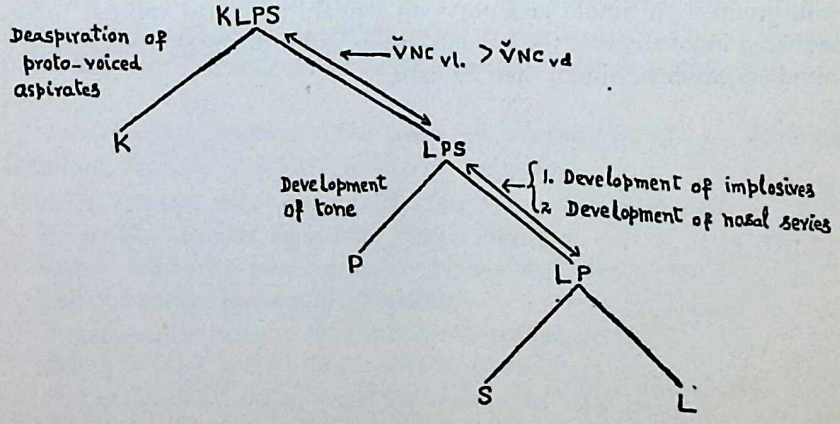


At this stage, it is simply an allophonic change, as it occurs under statable environments. Later on, with the loss of homorganic stops following the nasal, the series of five nasals acquires a phonemic status in the phonologies of Lahnda and Sindhi.

As stated earlier, Lahnda shares with Panjabi the retention of proto-geminates. The following examples can be given:

	K	L	P	S	
*sUkka	hukh	sU*kk*a	sU*kk*a	sUko	'dry'
kənn-	kə:n	kə*nn*	kə*nn*	kənU	'ear'
*əkkh-	ə:ch	ə*kkh*	ə*kkh*	əkhI	'eye'
*pVtthi	X	pU*tthi*	pI*tth*	pUthi	'back'
*cəkk-	X	cə*kk*	cə*kk*	cəkU	'bite'

This sub-grouping can be represented schematically in the following 'Family tree diagram'.



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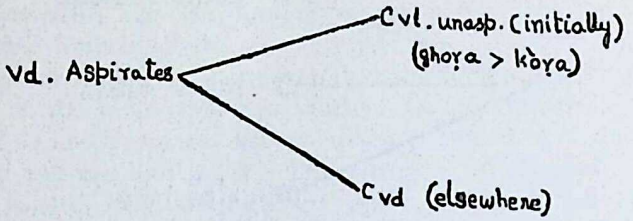
To explain the above family tree diagram, it may be stated that Kashmiri splits of from the proto-language on the basis of 'De-aspiration of proto-voiced aspirates'. Synchronically, this is confirmed as the modern day Kashmiri shows absence of voiced aspirates.

LPS sub-group innovates the development of *VNCvl.>*VNCvd.

Thereafter Panjabi branches of from the *LPS sub-group on the basis of development of tone.



(Proto voiced aspirates develop initially into voiceless unaspirates followed by high-falling tone and elsewhere into voiced unaspirates stops preceded by low-rising tone.)

Then LS sub-group further innovates a set of implosives and a series of 5 nasals. The absence of these elements in other languages (Kashmiri and Panjabi) and its presence in Lahnda and Sindhi only confirms this development.

As we have seen that Lahnda shares with Panjabi one proto-feature and innovates with Sindhi a set of implosives and a series of nasals. Of these two criteria of 'shared retention' and 'shared innovation', the second one is more cogent. Shared retentions may be due to linguistic and cultural borrowings whereas shared innovations have common period of development. According to Greenberg 'Common retentions are irrelevant to such sub-grouping. . . . The essential factor is shared innovation since shared retentions can always occur independently without a common period of development'.

Thus on the basis of the present study, it is clear that Lahnda forms a sub-group with Sindhi and not with Panjabi as it had splitted before the shared innovations of the LS sub-group and it definitely indicates that Lahnda is closer to Sindhi than Panjabi.

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THE LANGUAGE SITUATION OF GOA

in the 16th and 17th Century

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The Marathi reader is well familiar with the glowing terms[1] with which Father Thomas Stephens (1549-1619) has praised the Marathi language. This English priest came to Goa in 1579 as a member of the Jesuit Portuguese Mission. He lived at Bassein near Bombay only for one year i.e. 1611. Forty years of the rest of his life, he spent at Salsatte (Goa) Mission. He wrote books as a necessary activity, complementary to his missionary work. In recent years the language of Goa has become a topic of hot discussion. Let us see if we find any enlightenment on this thorny issue from the works of this foreign missionary, who must have faced the language situation without any preconceptions.

Father Stephens' works are threefold. The grammar of Konkani dialect that he has written in Portuguese, Doutrina Cristã, a religious booklet in Konkani and Christian Purāṇa, an epic poem of eleven thousand strophes in Marathi. If we find out the reasons why Father Stephens wrote his three works in three different language forms, it might help us to have a clearer picture of the question of the language of Goa.

Let us first consider his grammar. The original name of this grammar is 'Arte Da Lingoa Canarim'. For a considerable period of time this grammar was in manuscript form. However, its first edition came out at Rachol in 1640. Thereafter in 1858 Cunha Rivar edited and brought out its second edition in Goa. Father Lobo, a Christian missionary from Bandra, has translated this grammar into English. I have had a privilege of going through it in the manuscript form. The first edition of 1640 was not printed exactly as it was written by Father Stephens. It was edited and interpolated by other missionaries such as Diogo Rebeiro and at the very opening of this book, there is reference to this.

[1] Fr. Thomas Stephens, *The Christian Purāṇa*, ed. J. L. Saldhana, Mangalore, 1907, I-i-122-125:

Zaissy harallā māzi ratnaquillā: Qui ratna māzi hirā nillā
Taissy bhāssā māzi choghāllā: Bhāssā Marāthy
Zaissy puspā māzi puspa mogary: Qui parimalā māzi casturi
Taissy bhāssā māzi saziry: Marāthiyā
Paqhiā madhe mayoru: Vruqhiā madhe calpataru:
Bhāssā madhe mānu thoru: Marāthiyessi
Tarā madhe barā rassy: Sapta varā mazi rauy sassy:
Yā dipicheā bhāssā madhe taissy: Holy Marāthiyā.

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Generally the literature of a language comes first and the grammar afterwards. In any language the early works are religious narratives or a few tracts on practical subjects such as astrology, book-keeping etc. Through such compositions language becomes standardised and thereafter grammars are brought out. This is the usual course of events in the stabilization of a language. Basing on this common phenomenon, it has been argued that since Father Stephens brought out his Konkani grammar in the beginning of the 17th Century, it is obvious that a lot of literature must have been composed in the same language in the fifteenth and sixteenth century and then comparing the fact with Marathi language, it is concluded that since Konkani grammar came earlier than the Marathi one, Konkani is necessarily much older and richer language by far. Apparently the conclusion seems unassailable but on a closer scrutiny it would be found to be hollow.

It must be remembered that people need no assistance of grammar to learn their mother-tongue. Education in older times was privilege of the higher few. Universal education was a new thing, brought to this country by the British. The systematized education that the higher classes received consisted solely of the study of Sanskrit. Excepting the books specially prepared for princes, there were hardly any text-books in India of those days, meant for curricular study of any native language as such. Indigenous languages were taught in a haphazard manner. There was hardly any grammatical purity or orthographical uniformity about it. Correspondence and accounts were things which were managed by practice and emulation. Moreover, the class who lived by writing, could always fall back on the Sanskrit grammar which was expected to help them in the study of vernacular languages. Through manuscripts and religious compositions, Purāṇas and Kīrtanas and other religious discourses new Indo-Aryan languages continued to become standardized. In short, grammar was not so indispensable in old times to learn one's mother-tongue.

But it was altogether a different matter with foreign missionaries like Father Stephens. The languages of India were other tongues for them. They were in urgent need of an opportunity to inculcate among the people of this country, the tenets of Christianity. Moreover, confession is a very vital part of all the work of a Christian missionary and local Christians could only confess in their native language. It was therefore, urgently necessary for the foreign missionaries to learn the local languages intimately. It is, thus, that we find that the pioneering books of grammatical rules and dictionaries of the native languages of India have been prepared by foreign missionaries. Foreign missionaries that came from Europe during the 16th and 17th century, generally came as members of the Portuguese mission, for the King of Portugal subsidised such missions. The newly converted Christians, then, did not understand Portuguese. This point is well brought out in the first chapter of Christian Purāṇa where the author has stressed the necessity

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of composing Marathi Purāṇas[2]. Father Stephens has set out the background of his Christian Purāṇa by composing a dialogue between the narrating priest and the curious listener. In this dialogue the listener says, 'That valuable time may not be wasted in the acts of sin, in Portugal there are many longer devotional narratives. But we have no knowledge of the Portuguese Language'.[3]

What I wish to submit, therefore, is that the grammar written in Portuguese was not meant for the neo-Christians of Goa who did not know Portuguese then. If Father Stephens intended to write a book of grammar with a view to teach konkani to the people of Goa, he would, necessarily, have had to fall back upon the technical parlance obtainable in Sanskrit Grammar and would, most probably, have had to write it in Marathi only. The inferences drawn to the effect that Konkani had a rich literary background and Father Stephens and other missionaries strove to give it a status of fullfledged language are far from being true.

Before I finish with this topic of the purpose behind the composition of Konkani grammar, I would like to dispel one misunderstanding—namely that before the beginning of the 17th century i.e., before Father Stephens composed his Konkani grammar, Marathi knew no grammar. Till recently the rich treasure of literature of the Mahanubhav sect was unknown to the Marathi reader. But now people are fully aware of the Marathi literature of this sect, which flourished at the same time as Jnyaneshwar i.e., the end of the thirteenth century. Pandit Bhishmacharya, a Mahanubhav poet of the 15th century, has written two books on grammar; 'Nāmavibhakti' and 'Panchavārtika'. Out of these 'Panchavārtika' has been printed in full in M. S. Mone's book 'Marathi Bhāsheche Vyākaraṇakāra va Vyākaraṇa Prabhandhakāra'[4]. Therefore, the contention that Konkani had grammar much before Marathi had any, does not hold water.

Let us now turn to the other work of Father Stephens i.e. Doutrina Christa, the first book in Konkani dialect. This Doutrina is a booklet giving working knowledge of the main principles and tenets of Christianity. The language in which it is written is called by the author Lingoa Bramana Canarim, that is to say the Konkani spoken by the Brahmins of Goa. This appears to be the first book ever composed in Konkani. In other words this booklet marks the beginning of the Christian literary tradition

[2] *Ibid.*, I, i-126-145.

[3] *Ibid.*, 1, i-39-141.

Aisse avideche sangaty: Anequê carmê ācharaty:
Yā pāssoni vissaraty: Bhactipanthu
Hê nivārāveya cārannê: Phringuiyānchâ dessî hāti purānnê:
Ti vāchoniyâ tethila zanu: Cramauity vellu.
Vāchoni manî ghenty ulāssu: Nite seuity cathā rassu
Panna te dessiche bhāssessi abheāssu: Nahî āmâ.

[4] M. S. Mone, *Marāthi Bhāsheche Vyākaraṇakāra va Vyākaraṇa Prabhandhakāra*, Poona, 1927, pp. 89-118.

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of Konkani. This booklet consists of 80 pages and it is catechetical in form. It is composed of a few dialogues between the master and a disciple. This catechism was first published in print at Rachol in 1622. It was, however, in circulation in manuscript form for several years before its publication. The 3rd Provincial Conference of Christian Missionaries was held in Goa in 1585, of which we find a report in Cunha Rivar's treatise on Konkani[5]. This conference had given a directive that the 'Doutrina' which gives a bare outline of the principles of Christianity, should be translated into the Indian languages. In pursuance of the said directive and with a view to teach the rudiments of Christianity to the children of Neo-Christians, Father Stephens wrote this catechism in the dialect of Sarswat Brahmins. I have found no proof that there was any Konkani literature before this booklet. Therefore it can be maintained that this marked the beginning of Konkani literature.

Although it is obvious that before the Christianization, Hindus in Goa used to compose their books only in Marathi. Christian historians of Konkani language, let it spread that Konkani was a written language much before that. This belief was first set out in Cunha Rivar's treatise[6] and the same is repeated thereafter. J. Gerson da Cunha says, 'But most unfortunately, it so happened that the former (Konkani), we have scarcely any remnant, although tradition current in the country, ascribes to certain Brahmin writings which were once extant, but which were destroyed by the Portuguese missionaries in their mistaken zeal to propagate Christianity'[7]. Even G. A. Grierson, a celebrated scholar who surveyed Indian languages, seemd to labour under the same misapprehension for he remarks, 'Konkani is said to have developed an indigenous literature before the Portuguese conquest. This conquest was aimed at the introduction of Christianity and the old manuscripts were burnt by invaders as containing pagan doctrines. The zeal of missionaries caused the temples to be burnt and at the same time destroyed the old literature, so that no traces are now left'[8].

But historical facts do not allow such a misapprehension that before the Portuguese conquest books were written in Konkani. Dr. Pandurang S. Pissurlencar has written an essay in Portuguese, acquainting his readers with the books confiscated by the Jesuit missionaries in Goa and which were carried to Rome and Braga (Portugal)[9]. From the list of works given in the essay, it could be seen that even those works were mostly written in Marathi. Therefore, it seems quite clear that the books burnt as a result of the displeasure of Christian missionaries and Portuguese rulers were written in Marathi.

[5] A. K. Priolkar, *The Printing Press in India*, Bombay, 1958, pp. 163-164.
[6] *Ibid.*, pp. 219-220.
[7] J. Gerson da Cunha, *The Konkani Language and Literature*, Bombay, 1881, p. 25.
[8] G. A. Grierson, *Linguistic Survey of India*, Vol. VII, Calcutta, 1905, p. 166.
[9] P. S. S. Pissurlencar, *Os Primeiros Livros Maratas Impressos em Goa*, Bastora, Goa, 1956.

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Regarding this catechism, or the first Konkani book, there is another misconception current that because Father Stephens' Christian Purāṇa, written in Marathi could not be understood by the Konkani speaking natives of Goa, he wrote Doutrina Crista in Konkani. Shri B. B. Borkar, the famous poet who writes both in Marathi and Konkani while addressing the 5th Konkani Conference, as its president, has put forth this view.[10]

But this is also far from being true. Although Christian Purāṇa was printed in 1616 and Doutrina Crista in 1622, in fact the later was current in manuscript form much before that, at least as early as 1601. Prof. A. K. Priolkar has recently published the English Translation of a letter dated 6th December 1601, written by Father Stephens, when he was Rector of Jesuit College at Margaon, to his superiors in Rome. In this letter, after referring to the special aspects of Margaon Mission he writes:

'The third, is a catechism which has been done in the language of the country which the children learn by heart. They do not find themselves at a loss, when a superior visits the church and takes a chapter of the doctrine with its questions and answers. I have seen children replying to a whole chapter, small boys and girls, who scarcely could speak. And one discovers in the confessions that the knowledge of it, however little, is beneficial'.[11]

From this evidence it could be clearly seen that in 1601 students were asked to learn by heart this catechism composed by Father Stephens.

Moreover, there is an internal evidence in Christian Purāṇa itself to prove that the Doutrina was composed earlier than the Christian Purāṇa. In the above mentioned background of the Christian Purāṇa we find in the mouth of the curious listener the following verses:

Sassatty Dessî yeque Devamandhiri: Astamānî aditevārî:
Christāuānche cumar ritu sary: Dautriny baissale.
Padry phuddâ ballaquê baissaty: sussarâ sabdî doutrina uchārity.
Gaghani paddasabda uthity: Pauitry Sumrutiche
Doutrinicha vellu sarala: Tâva yecu bramhannu pātalā:
Padry gurussi bolatā zāhalā: Namascāru carunu . . .
Zi zi hy doutrini barauy niquy: carāuissy pātha hiye loquî:
Deāueā parama vollghy: Paramesuarāchy
Caissê teyāthê barauê maguize: Anny caissê sācha mānize:
Barauеā caranniyāni varitize: cauanne pary

[10] *Bhou Bālkrishna Bhagwant Shaṇai Borkār Hāngele Ulop*, Bombay, 1952, p. 9.

'कोंकणी उतरां भरसून रचिल्लें मराठी ख्रिस्त पुराणय साधारण लौकांक फाव तितलें सौपें जायना आनी पातळना हैं ताका (To Fr. Stephens) रोकडेच दिसून आयलें आनी ताणें कोंकणींत दौत्रीना क्रिस्तां बरैलें. अर्थात् कोंकणी भास स्टीफन्सच्यां काळाक परिपक्व जाल्ली आनी लोकांक मराठी समजूक कठीण जावंक लागिल्ली हें उक्तें दिसता।'

[11] A.K. Priolkar, 'Two recently discovered letters of Father Thomas Stephens'. *Journal of the University of Bombay*, Vol. XXV, Part II (September 1956), p. 121.

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Ya tini vastu ziya hati: tea guru tumî sicauity:
Ya pãssoni prãnniya mucti: zoddaila sate
Panna he doutriny vanchoni ana: cahi yeca agalle zastra Purãṇa:
Zari ãmâ carauite patthana: Tari honte châga
(*Christian Purãṇa* I. i-126-134)

This long extract makes it abundantly clear that the neo-Christian converts were reciting Doutrina every Sunday. But they were not satisfied with the Sunday recitations of this Doutrina. Doutrina taught them what to pray for from God, how to know him and how to behave according to the tenets of Christianity. Still they needed something more in the nature of 'Zãstra Purãṇa'.

Moreover, in point of form and content, quantity and quality, the Christian Purãṇa and the Doutrina are quite different. It is, therefore, ridiculous to state that one was meant to substitute for the other. The Christian Purãṇa, an epic poem of 11,000 strophes (Ovis) can never be compared with this small booklet of catechism. In short, to say that Doutrina was composed in Konkani after the Christian Purãṇa turned out to be inaccessible, is to place the cart before the horse.

What kind of 'shãstra purãṇa' did the neo-Christians ask for? And in what language did they want it?

While taking up these questions for discussion, we come to the very aims and objects of the composition of the Christian Purãṇa.

In the above mentioned passage the listener says, 'Men invent devious ways to entertain themselves. Some gamble, some gossip, some loaf about in the bazaar. Most people waste their precious time in foolish occupations. The Purãṇas in Portuguese language try to minimize this mischief. While narrating absorbing stories they inculcate in the reader love for the worship of God. The Purãṇas which were read formerly for this purpose are banned. But why are you not preparing substitute books for our benefit?'[12]

[12] Manuxe dehachy pracruty: Guru tumî tari zãnnaty:
Nauiyã vastu chintity: Vello vellâ
Ghari athauã bhalateyã thãyã: chãngu vellu cramãueyã:
Nãnã pretna guiuassuniyâ: Pãhãnty nite
Ye yetuquê naghade tari: Upãe sodity ãnni yeque pari:
Teã pãssoni yequeca zûuhəry: Quellaty qhellu
Melloniyã dãhã ãtta: Yecamecã carity chacãtta:
Anni yeca zãnty hãttã: Hindãueyã
He nivãraveyã cãrannê: Phringuiyãnchâ dessî hãti purãnnê:
Ti vãchoniyã tethila zanu: cramavity vellu
Zaisse teã teã dipãvati: Dessaparinchi purãnnê hãty:
Taissî pustaquêcâ namellaty: Amanchã dessî
Hã mottã abhiprãvo zi mhanne: Tumi tari vãrily maguilî purãnnê:
Tari pratipustaquê amâ cãrannê: cassî nacarity tumî
(*Christian Purãṇa* I. i-135-143)

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This means the Christian missionaries of Goa had prohibited the neo-converts from reading the earlier purāṇas. But they had no substitute-books. The listener says further:

Yā passoniyā zi ātā: Gentiyancheā purānna cathā:
Neueā Christāuāncheā chitā: Atthauaty deghā
Zari Marātthiye bhāssechî cāhî: Xāstra purānnê hontî āmâ thāî:
Tari locāchā manorathu paî: Purna hontā
(*Christian Purāṇa* I. i-144-145)

As the neo-converts had no 'substitute-books' they became nostalgic about the old Marathi Purāṇas. To make them forget these earlier devotional works written in Marathi like Jnyaneshwari, Bhagawat by Eknatha and Mahabharata by Vishnudasnama and others, neo-converts requested the priest to prepare substitute-books (Pratipustaquê), that is to say Marathi narratives full of devotional sentiments. Father Stephens met this demand of neo-Christians of Salsatte by composing the Christian Purāṇa in Marāthi.

Father Stephens' Marathi Christian Purāṇa must have been very popular in Goa at that time. Even as far back as 1616, 1649 and 1654, there were three printed editions published in succession. In 1684 the order banning the use of native languages was enforced by the Portuguese rulers[13]. Obviously, therefore, the Marathi Literary traditions of Goan Christians was well nigh lost. On the other hand, there has been a continuous literary tradition of Marathi works among the Hindus of Goa. They continue, to this day, to learn Marathi in schools and cherish Marathi Literature as their own.

There is also a misapprehension regarding the language of Christian Purāṇa. It has been stated by some that the Purāṇa is in Konkani. Although the Purāṇa has some dialectal elements here and there, substantially it is written in Marāthi. The historians of Konkani language have erroneously included this Purāṇa in the list of Konkani books. One finds such a mention in the learned treatise of Cunha River[14]. Gerson da Cunha, in his 'Konkani Language and Literature' divides Konkani into rich (Hieratic) Konkani and lay (Demotic) Konkani and places Christian Purāṇa in the first category[15]. This misrepresentation of facts still persists. Dr G. M. Moraes has written an article on the life and work of Dr J. Gerson da Cunha in the Journal of the Asiatic Society of Bombay. In that article he has tried to prove that the Christian Purāṇa is composed in Konkani and not in Marathi. He has quoted only such verses from Christian Purāṇa as would suit his purpose and has intentionally omitted the verses that followed the ones he has quoted and which would disprove his pet theory[16]. It is not necessary for me to

[13] A. K. Priolkar, *The Printing Press in India*, op. cit. p. 183.
[14] *Ibid.*, p. 183. [15] J. Gerson da Cunha, op. cit., p. 29.
[16] G. M. Moraes, 'Dr. Jose Gerson da Cunha', *Journal of Asiatic Society of Bombay*, Vol. 39-40 (new series), 1947, p. 29.

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enlarge upon this subject as Prof. A. K. Priolkar has ably refuted his contention[17]. This only shows how men of learning like Dr. Moraes carry on futile controversies purposefully although their pet theories are refuted many a time.

But the author of Christian Purāṇa, however, had not the slightest doubt in his mind that he was composing his purāṇa in Marathi. He has mentioned Marathi as the language of his composition in the prologue[18] as well as in the epilogue[19]. In his prose preface to the Purāṇa he specifically states, 'All this is written in the Marathi Language'[20].

And there is nothing unnatural if Father Stephens wrote in Marathi to let the Goan neo-Christians of his time enjoy the biblical stories. The Goan Marathi tradition, as mentioned above, is quite old. Copperplates and Stoneplates found in Goa and written in about 1348, 1402, 1413 and 1436 are all in Marathi[21]. Although Portuguese rulers and Christian missionaries played havoc in Goa and burnt all the vernacular books, even then the language of Goa for writing purposes remained Marathi. In the above-mentioned essay of Dr. Pissurlencār, we find Marāthi works of Dnyānadeva, Vishnudāsnāmā, Simpānāmā, Shivdās and others. Dr. Pissurlencār has also introduced to the Marathi readers a work 'Krishna-Charitra-Kathā' which was written in Marathi by a Goan. Hindu poet Krishnadas Shyāmā in 1526, at Salsatte (Goa)[22]. This Marathi work is composed before the territory came under the Portuguese domination. Thus one can see that nobody had imposed Marathi tradition on the Goans. It is their own making. All the religious and social concourses in Goa, such as bhajans, kirtans, puranas and pravachanas, meetings and conferences, dramas and other forms of entertainments were all conducted in Marathi. Before the Portuguese rule the standard language of Goa was Marathi. When Father Stephens had to compose some rough and ready stuff like the catechism he used Konkani, but when he wanted to compose a work to measure up to the current literary standards, an epic poem, he wrote it in the standard language i.e., Marathi. Like Hindus in Goa Father Stephens though a foreigner, loved Marathi language intensely. He has observed in his prose preface that there is no better language in this country to convey devotional sentiments

[17] A. K. Priolkar, *'Truth has to be told'*, *JASB*, Vol. 41-42/1966-67 (new series), 1968, pp. 254-267.

[18] *Christian Purāṇa* I-i-121: Paramaxāstra zaguî praghatāueyā:
Bahutā zanā phalla sidhy houāueyā:
Bhāssā bandoni Marātthiyā: cathā niropily.

[19] *Christian Purāṇa II. 59-120.*
Deuagranthu Marātthiyessi: Abhangu quelā.

[20] Fr. Thomas Stephens, op. cit., 'Author's Preface', p. XCIII:
'He sarua Marātthiye bhāssena lihile āhe'.

[21] P. S. Pissurlencar, *Inseriçoes Pre-Portuguesas de Goa*, 1938.

[22] P. S. Pissurlencar, 'Sārswat Santakavi Krishnadās Shāmāchā Shodha', *Shree Shāntādurgā Chattsshatābdi Mahotsava Granth*, Bombay, 1966, pp. 64-78.

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effectively than Marāthi[23]. His eulogy of Marāthi language[24] has the ring of a sincere sentiment and it is no conventional utterance of praise.

The works of Father Stephens both in Marathi and Konkani were written and printed in the Roman Script. The obvious reason why a foreign missionary like Stephens adopted the Roman script appears to be that he found it easier to learn the foreign language through a known alphabet than through an unknown one. The other possible reason might be the facility of printing. Prof. Priolkar's book 'The Printing Press in India' supplies information as to how the printing press to be sent to Abyssinia with Juan de Bustamante in 1556, happened to be shipped accidently to Goa[25]. The types in this press were Roman. There may yet be one more reason why a resort was made to the Roman script by the missionaries. The editor of 4th edition of Christian Purāṇa, Joseph Saldhana says, 'Added to these reasons there was perhaps another in the aforementioned discouragement by the Portuguese polity, of Hindus' literature through the ungrounded fear of promoting idolatory and in the probable disfavour in which the sacred script of the Hindoos—the Devanāgari alphabet—may have been held'.[26]

Even so we find sufficient evidence suggesting that Father Stephens all along felt that his works should be published in the Devanagari script. In his letter to his superiors dated 5th December 1608, he observes 'Before I end this letter I wish to bring before your Paternity's mind the fact that for many years I have strongly desired to see in this Province some books printed in the language and alphabet of the land, as there are in Malbar, with great benefit to Christianity. All this could not be achieved for two reasons. The matrix amounting to six hundred, while the characters are syllables and not alphabets as our twenty four in Europe. The other because this holy curiosity could not be put into execution, without the order and approval of the Provincial'.[27]

The wish expressed in this letter was not fulfilled. Father Stephens' works were published in the Roman script only. One thing, however, is as clear as daylight that even a foreign missionary like Father Stephens had fully realised in those times that the then current script in Goa was the Devanagari script.

In short, if we understand the background and content of Father Stephens' threefold writings, their linguistic significance is quite evident: Right from the beginning of the Portuguese conquest (1510) and even a century thereafter, the standard language of Goa was Marāthi; spoken dialect, Konkani and the alphabet, Devanagari. However, it is beyond the scope of this paper, to examine the exact genetic relationship between Konkani and the literary Marathi of those days. What we have examined here is the cultural relationship between the two.

[23] *Christian Purāṇa*, op. cit., p. xciii: 'Heā dessincheā bhāssā bhitura hy bhāssa Parmesuracheā vastu niropunssi yeque aissy dissali . . .' [24] See footnote 1.

[25] A. K. Priolkar, *The Printing Press in India*, op. cit., pp. 2-9.

[26] Fr. Thomas Stephens, op. cit. 'Introduction' pp. XLVIII-XLIX.

[27] A. K. Priolkar, 'Two recently discovered Letters etc'., op. cit. p. 123.

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SOME COMMENTS ON 'THE LANGUAGE SITUATION OF GOA IN THE 16TH AND 17TH CENTURIES'

WILLIAM MADTHA

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The chief aim of this article is quite modest. It is just to express some of the difficulties that I came across while I was reading the essay 'The Language situation of Goa in 16th and 17th century'. Hence it is not a formal review but mostly a plea for clarification.

Dr S. G. Malshe, the author of the article in question, says in the initial paragraph that 'In recent years the language of Goa has become a topic of hot discussion'. He continues, 'Let us see if we find any enlightenment on this thorny issue from the works of this foreign missionary . . .', that is, Father Thomas Stephens S.J.

Hence the purpose of his article is to throw light on a problem. The problem is—the language of Goa in the 16th and 17th centuries. This problem is a thorny one according to the author. In order to answer the question of the language of Goa the author proposes to have recourse to the works of the well known Rev. Fr. Thomas Stephens S.J.: 'If we find out the reasons why Father Stephens wrote his three works in three different language forms[1], it might help us to have a clear picture of the question of the language of Goa'.[2]

Though the author has paved the way toward the solution of the problem he prefers to divert and discuss a common argument which can be framed in the following way for the sake of brevity without sacrificing clarity:

Literature is prior to grammar. Konkani grammar appeared in the beginning of 17th century. Therefore there was lot of literature prior to it in that language. Another popular contention, says the writer, is that Konkani grammar came earlier than Marathi. Hence the former is necessarily a much older and richer language. What is the opinion of the author about these contentions? 'Apparently the conclusion seems unassailable but on a closer scrutiny it would be found to be hollow'.[3]

Instead of stating the reasons to indicate the 'hollowness' of apparently unassailable conclusions the essayist brings about a new idea that in olden times grammar was not so indispensable to learn one's mother-tongue. Is the situation any way different in modern times?

[1] Probably by 'three different language forms the author means three different languages.'

[2] S. G. Malshe 'The Language situation of Goa in the 16th and 17th century' —paragraph 2.

[3] *Ibid.*, para 4.

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After going at a tangent for a while in the sixth paragraph the author slowly starts to find out the reasons why Father wrote his grammar in Portuguese. Briefly, it is not for the natives of Goa but for missionaries. This is stated in a round about way.

Here we must note that the writer has completely forgotten to prove the hollowness of the above stated contentions. There was no need to raise them since he depends on Rev. Stephens' works for the solution of his problem. But once he says that the arguments are hollow he should prove it. To one of the contentions, however, he gives the reply after about four paragraphs[4].

The next natural question, as we are oriented by the introductory paragraphs (1-2), is why did Fr. Stephens write *Doutrina Christa* in Konkani? Instead of directly answering this question to the point after a brief description of the book the essayist comments: 'This appears to be the first book ever composed in Konkani . . . this booklet marks the beginning of the Christian literary tradition of Konkani'[5].

The word 'appears' is wisely used, for, we have no scientific ground to say that until Christian era started in Goa no work was ever written in Konkani. Konkani books of the period may not be available. Just because books are not available we cannot conclude that there were no books written.

The opening line of eleventh paragraph reads as follows: '. . . it is obvious that before the Christianisation Hindus in Goa used to compose their books only in Marathi. . . .' The next paragraph runs as '. . . historical facts do not allow such a misapprehension that before the Portuguese conquest books were written in Konkani'. The proof given by the author is the article written by Dr P. S. Pissurlencar. It acquaints us with the books confiscated by the Jesuit missionaries in Goa and which were carried to Rome. . . . 'From the list of works . . . it could be seen that even those works were *mostly** written in Marathi'.[6] Mark the word 'mostly'. Then the author concludes, 'Therefore, it seems *quite clear* that the books burnt as a result of the displeasure of Christian missionaries . . . were written in Marathi'.[7]

It is but apparent that the word 'mostly' does not exclude the possibility of books written in other languages viz., Konkani. Besides, the author has not given any historical fact which makes obvious that before the Christianisation, Hindus in Goa composed their books only in Marathi and no books were written in Konkani.

According to the letter of Fr. Stephens, quoted by the author, *Doutrina Christa* was written 'in the language of the country'.[8] The author of the article admits that the book was written in Konkani.

[4] *Ibid.*, para 8.
[5] *Ibid.*, para 9.
* Italic throughout is mine.
[6] *Ibid.*, para 11.
[7] *Ibid.* [8] *Ibid.*, para 14.

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Therefore Konkani was described by Fr. Stephens as 'the language of the country'—namely of Goa. Marathi was not described this way. This does not mean that Marathi was not existing. It simply means that it was not the mother tongue of Goa but probably a prestige language which entered Goa. This seems to be a sound hypothesis based on Fr. Stephens works.

At this juncture we are at a loss to understand the following statement of Dr Malshe: 'If Fr. Stephens intended to write a book of grammar with a view to teach Konkani to the people of Goa he would . . . most probably, have had to write it in *Marathi* only'. When the people do not find it difficult to understand Christian doctrine in 'the language of the country i.e. Konkani then why say that the Father would have had to write the grammar in Marathi *only*?!

Why Father Stephens wrote *Christian Purāṇa* in Marathi is a legitimate question that arises from the methodology proposed by the author for the solution of the problem. But the answer that he wanted to make the neo-Christians forget 'earlier devotional works written in Marathi . . .' does not seem to be so legitimate!

Neo-converts belonged to not only Marathi but chiefly to Konkani community. Hence Christian purana could not have been written either as a substitute or as a brainwash to the Marathi converts.

Rev. Stephens, S.J. wrote the Purāṇa in a language which could be followed either by a Marathi speaker or by a Konkani speaker. Hence the language of Christian Purāṇa can be described as a happy blending of Konkani and Marathi.

Another remark of the author, namely, '. . . nobody had imposed Marathi tradition on the Goans. It is their own making',[9] can not hold water as it is based here merely on the fact that Marathi works were available prior to Portuguese occupation.

After reading the article 'The Language Situation in Goa' critically I feel to conclude that 'the language of the country' namely of Goa was Konkani. Marathi was the prestige language whose advent can not be proved from the works of Fr. Stephens. Portuguese, however was the boon of foreign invasion. Here once again we may refer the letter of Fr. Stephens quoted by the author[10].

[9] *Ibid.*, para 27.
[10] Cf., f. n. 8.

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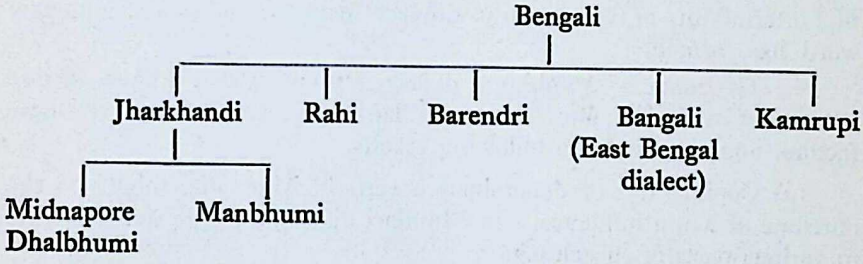
MUNDARI AND SANTALI ELEMENTS IN THE DIALECT OF MANBHUM

REKHA SINHA

(*Patna*)

Manbhumi dialect is spoken by the people of Purulia district and its contiguous areas. It is considered to be one of the dialects of Bengali language and is classified under the Jharkhandi group of Bengali language as shown below.



Due to the long association with the tribal dialects like Santali, Mundari, Kharia, Paharia etc., Astro-asiatic elements are largely found in this dialect of Bengali language. Places near Purulia town, where the tribal people live in large numbers are mentioned below with their approximate locations.

Purulia
Ayodhya
Pahar
Bagmundi
Ichagarh
Barahabhum.
Dalma

Moreover people of scheduled caste (Bauri, Rajoar, Dhobi, Ghasi, Pasi etc.) who have their origin from Mundari stock but have Bengali as their mother tongue, are found all over the district*. Because of this

*According to the statistical account of Manbhum in 1872, by W. W. Hunter. Of the total population 23.3 per cent were aborigines, 22.1 per cent semi Hinduised aborigines and 49.7 per cent were Hindus. According to the Census report of 1931, 67.52 per cent were Bengali speaking and 13.90 per cent were Santali-Mundari, Kora etc., tribal language speaking of the total population. In the Census report of '51, we find 47.8 per cent were Hindus and 17.2 schedule tribe population; '61 census tells us that 19.3 per cent of the total population are of tribal origin. Thus we find this dialect is in contact with the tribal languages from a very long time.

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language contact we find, some distinctive Santali and Mundari influence in Manbhumi dialect. In this connection, it will be worth looking into the following points as well.

1. Mundari and Santali words have come generally through lower class of people (e.g. Kharia, Bauri, Rajoar etc.) whose mother tongue is Bengali and occasionally they have to come in contact with tribal people.

2. From the Census report of 1931, 1951 and 1961, it is learnt that people whose mother tongue is Santali have taken to Bengali as their subsidiary language. This bilingualism has surely helped the infiltration of Santali words, idioms and phrases in the Manbhum dialect.

3. Most of the borrowed words or expressions have converged into Bengali intonation and often semantically changed; sometimes, we find intermixture of two words in different context, and as a result a new word has formed.

4. Grammar of Manbhumi dialect is more or less influenced due to contact with the aforesaid tribal languages. Considering all these factors, one may find the following results.

(*a*) Copious use of denominative verb in Man. dia. might be the outcome of Mun. influence. In Mundari dialect, a single word may be in various parts of speech e.g.

radboda (of hail, dry fruit or other dry thing falling all
noun adj. adv. about in rapid succession; clattering sound)

In Man. dialect we also have this type of use;

	gandha	(smell)		Jad	(cold)	
noun	adj.	adv.	noun	adj.	verb.	adv.
	verb.				(JadachE)	
	(Jadache)				=(feeling cold)	
	=Smelling.					

(*b*) Jingle-words are in extensive use in Manbhumi dia. Just like Mundari and Santali dialects. Some of these words are:

lɔrsur (sense); tatatahi (fresh, hot); ɔklɔkatE (gasping) tsi: ts; a tur (Scattering); etc.

(*c*) Many usages in Man. dia. owe their origin, to Mun. and Sant. dialects: e.g., Mun. tãḍ: means 'up-lands'.

In Man. dia this word is used in more than one sense.

tã : d

1. barren uplands 2. uncultured, brusque fellow 3. a fellow who procures clients for his pleader.

rE:ngE=Mun. Hunger.

In Man. The meaning is changed and also it is some what phonetically changed: rE:ng h a=good-for-nothing.

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The vocabulary of Man. dia is replete with the borrowed words from Mundari and Santali languages. Most of these loan words are concerning cultivation, animals, words used as charms for evil spirit, plant and every day life of the common folk. Until recently, rather after the merger of Purulia district with Bengal these words are speedily becoming out-of-date. The main cause is the mass arrival of the refugees from East Pakistan who speak East Bengal dialect. It is interesting to note they are influencing the dialect not of the lower class of people but of the middle class of people. And at present partly because of spread of literacy and radio broadcasting in standard dialect and partly because of the contact with the dialect of East Bengal, this dialect is rapidly changing.

Some of the most commonly used words in Man. dia which owe their origin from Sant. and Mun. dialects are given below:

Man. a: ka: l y a greedy; Sant. *a:klaha*
(Sant. a: k l a h a)
Man. *bathan* 'cowshed'. Sant. *id*
Man. *bɔ da* 'he goat' Sant. *id*
Man. *bč:da* 'The ring of plaited straw' Sant. *id*
Man. *bintrif* 'omission' Sant. *bintric* 'to be grieved'
Man. *Cepi* Sant. *Chepra, chekpa low*, 'small statured girl, deficient in height'
Man. *dɔ ḍ a ḍE* Mun. *dad* 'to flee, to impose fine'
to rule on hard grorend
Man. *dang* Mun. 'big thick stick'
Man. *ga : da : l* 'heap, dump' Mun. *gada, guder* 'a swarm'
Man. *huḍka* (Sant.) a wooden bar for the door
Man. *fɔbɔr* (Sant. 'great, rich') 'strong'
khã: ci n (Mun.) a pretty large basket be smeared with cowdung.
Man. *lEga* 'to carry' Sant. *leglam*=to carry off
Man. *lisurE* Sant. lisur='state of destitution' In Man. The word is used to describe the state of utter helplessness.
Satur-batur Mun. refuse from a feast, dirty, incomplete
Man. 'auspicious uttering to scare away the evil.'

Abbreviation

Man. dia =Manbhumi dialect.
Man.
Mun. =Mundari dialect.
Sant. =Santali dialect.

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Section 3

EVENING TALKS BY FACULTY

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THE CHARACTERISTIC FEATURES OF THE DRAVIDIAN LANGUAGES

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This paper attempts to present the characteristic features of the Dravidian linguistic family that distinguish it from the Indo-European, family or one of its branches, the Indo-Aryan family of languages. Although it is mainly based on Robert Caldwell's remarks in his book, *A comparative Grammar of the Dravidian or the South Indian family of Languages*, it contains some additions to and modifications of his views in the light of modern research.

1. All vowels in the Dravidian languages have the contrast between short and long. This is true also of the vowels *e* and *o* of which the short variety is missing in early Indo-Aryan. The retroflex consonants are quite common in Dravidian; their presence in Indo-Aryan is attributed to the influence of Dravidian by many scholars (see Caldwell 1856:147f, Jules Block 1965, M. B. Emeneau 1956:7). The Proto-Dravidian language is characterised by the presence of six series of stops in contrast to the five series of stops of Indo-Aryan. The peculiar alveolar stop of P Dr has latter merged with either the dental or the retroflex (or in a few languages like Tulu, Kui-kuvi with the palatal) stop; this change seems to be induced by the Indo-Aryan languages.

2. The gender systems in Dravidian fall under three types. The two languages, Toda and Brahui have lost gender distinction in later periods.

Type I: All SDr languages except Toda.

M.sg.	Hum. pl.
F.sg.	
N.sg.	N.pl.

Type II: Telugu and kuṛux-Malto (in the latter two languages, neuter plural is absent)

M.sg.	Hum. pl.
F & n.sg.	N. pl.

Type III: All C Dr languages except Telugu.

M.sg.	M. pl.
F & n.sg.	F & n. pl.

It is by now established that of the three, the second type with optional neuter plural represents the P Dr gender system (for details, see P. S. Subrahmanyam, 1969 a).

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3. In Dravidian the order of the various suffixes in a noun, when they are present, will be as follows:

$$N+(Plural)+(Oblique)+\begin{cases}\text{Case suffix}\\ \text{Post position}\end{cases}$$

The oblique base formation and the usage of post-positions is a speciality of the Dravidian linguistic family. In Indo-European the case suffixes differ according to the number (sg, dual or plural) of the noun and in it it is difficult to separate the number and the case suffixes. Modern Indo-Aryan resembles Dravidian rather than Sanskrit in this respect.

4. The neuter plural suffix in Dravidian is an optional category in both S Dr and N Dr. It is obligatory only in C Dr and there it seems to be an innovation. This is so in both nouns and finite verbs. In Tamil, for example, there is no number distinction at all in the future tense neuter forms, e.g., *irukk-um* 'it/they (neut.) will be'.

5. The adjectives in Dravidian are indiclinable unlike the adjectives in Indo-European.

6. Most of the Dravidian languages have two forms for the 1st person plural pronoun, one for the exclusive and the other for the inclusive. The P Dr forms for these are respectively **yām* and **nām*. A few modern Indo-Aryan languages like Marathi and Gujarati created such a distinction in them due to the influence of the Dravidian languages. (For details, see Subrahmanyam 1967-68).

7. The verbal adjectives play an important role in Dravidian. They have the following structure:

Verb stem—Tense Marker—Adjective Marker (**a*/**i*) The IE family or its branch, the Indo-Aryan do not have a category similar to that of Dravidian. In Dravidian they are found usually in three tenses, i.e., past, non-past and negative.

8. The adverbial participle or gerund is another peculiarity of Dravidian. It consists of the stem and the past tense marker (followed by the enunciative vowel u if ending in a consonant). The frequent usage of a similar category in Indo-Aryan is attributed to the influence of Dravidian (see M. B. Emeneau 1956).

9. Most of the Dravidian languages have means to express negation in the verb by using a special suffix, e.g., old Ta. *ceyy-ϕ-en*, Te. *cēy-a-nu*, Go. *kiyy-ō-n* 'I will not do'. Excepting kuṛux and Malto, all other Dravidian languages have this construction; those two languages might have lost it at a later period. The structure of the negative verb is as follows:

Verb stem—Negative Marker—Personal Suffixes.

It is to be noted that a negative adverbial participle as well as a negative adjective participle are also there in most of the languages.

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Furthermore, a number of Central Dravidian Languages have a morphological construction to express the past Negative. Its structure is:

Verb stem—Neg. Marker—Past Marker—Person Marker. It is found to occur in Konda, Kui-kuvi, Kolami, Naiki, Parji and Gadaba. E.g.

Kolami *sī-e-t-an* ' I did not give'

(For details, see Subrahmanyam 1969b).

10. Lastly, the Dravidian languages are distinguished from Indo-European by the absence of these two categories:

(1) A Passive Voice at the morphological level, and

(2) Relative Pronouns, the function of which is carried out by the relative verbal participles.

References

Bloch, Jules, 1965. *Indo-Aryan from the Vedas to Modern Times* (English Tr. by Alfred Master). Paris.

Caldwell, Robert, 1856. *A Comparative Grammar of the Dravidian or South Indian Family of Languages* (reprinted), Madras.

Emeneau, M. B., 1956. 'India as a Linguistic Area', *Language* 32:1-16.

Subrahmanyam, P. S. 1969a 'The Gender and Number categories in Dravidian' *Journal of the Annamalai University* 26:79-100.

—1969b 'The Central Dravidian Languages' *JAOS* 89:739-50.

—1967-68 'The Personal Pronouns in Dravidian' *BDCRI* 28:202-17.

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VERBAL LEARNINGS

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Verbal Learning as a branch of psychology deals with the acquisition of verbal habits. Learning to spell, read, memorise a poem or acquire a foreign language vocabulary are all included in the general area covered by Verbal Learning. However, in order to have controlled experimentation, psychologists have simplified the learning situation by introducing easily controlable verbal units in their laboratory studies. Under laboratory studies the present day psychology does not emphasise upon finding out general laws resulting in 'learning as a function of' type of conclusions but attempts to find out parametric relationships accounting for a substantial segment of variance in the Verbal Learning phenomena. These relationships bind together reliable measures of the learning phenomena with their relevant conditions. In this sense Verbal Learning concerns itself with a fairly narrow range of behaviour unlike the formal learning theories of Hull, Spence and Tolman, where the emphasis is on more pervasive concepts that enter into much wider range of human or animal behaviour.

Starting from the work of Ebbinghaus (1885) it has been realised that for simplification of the Verbal Learning situation single verbal units are better than prose passages and stanzas etc. From the findings of Ebbinghaus it is clear that some amount of regularity and predictability of verbal behaviour is possible. In fact, the famous 'curve of forgetting' reported by him (1913) was fitted into a logarithmic function. For uniformity and ease in presentation, Ebbinghaus had used a simple apparatus called the 'memory drum'. This is only a uniformly moving drum in which verbal units are attached and appear through an aperture.

Types of Verbal Units: It was apparent to even the early workers that one of the first things to be controlled under experimental conditions is the *meaningfulness* of the Verbal Units. The more meaningful a verbal unit is, the more memorable it becomes. Therefore, rather than words, phrases or sentences, digits or scrambled letters were preferred as verbal units. Ebbinghaus discovered what is known as a 'nonsense syllable'. The nonsense syllable is a consonant-vowel—consonant combination resulting in no meaning or words. These proved to be very useful for memory studies.

Types of presentation: Generally there are two types of presentation of verbal units. One kind of presentation is called a 'serial list' and the other is called 'paired-associates'. The data under the first presentation are usually referred to as *serial learning* and the same in the second are called *paired associate learning*. We shall see that there are some subtle differ-

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ences between the two kinds of learning. In the serial presentation verbal units are presented one after the other within short intervals, say two seconds, and the learner is supposed to *anticipate* what is coming next. After some trials the subject comes to anticipate the items correctly. The number of correct anticipation grows from trial to trial. The standard number of items presented in the list is from 8 to 12, for both kinds of presentation. In the paired associates list the verbal units are presented by pairs. The pair may consist of nonsense syllables or nonsense syllables with digits or words with nonsense syllables and so forth. The first member of the pair is called a *stimulus* and the second member of the pair is referred to as *response*. The learner is shown a verbal unit (the stimulus) first and then the pair stimulus and response together and then the stimulus alone and is asked to associate the response component with specific stimulus items. In paired associate learning *confirmation* is usually given after the response, that is to say, the subject is shown the correct pair again. The order of presentation is mixed from trial to trial to take a precaution against the growth of serial learning for the stimulus or the response component.

It has been found that the time required to learn a serial list is directly proportional to the length of the list; as the correct responses increase, the errors decrease; this process is faster in the first few trials and slows down later on. There is another technical phenomena known as the 'serial position effect' in serial learning. Somehow, the greatest number of correct responses occur at the first part of the list and the next most frequent number of correct responses occur in the middle of the list, i.e., to say if we plot a graph of the number of correct responses along side the first, second, third etc., positions of items in the list we will get a *bowed curve*. This is known as a *serial position curve*. As to why this serial position curve develops, there are a number of explanations. Some of these explanations refer the what is expressed as 'retroactive inhibition'. It shows that each item generates some inhibition which gets accumulated in the middle. There have been attempts to define the 'functional stimulus' in serial learning. The 'Chaining hypothesis' for defining the *functional stimulus* for serial learning states that the functional stimulus is the proceeding item of the list i.e. to say, if we represent our verbal units of 7 items as a-b-c-d-e-f-g the learning proceeds at first as ab-bc-cd- etc., and then finally is integrated into a continuous chain. One alternative of the chaining hypothesis is 'cluster hypothesis'. According to it a cluster of two or more items rather than a single item serves as a functional stimulus. Many experiments have been carried out to examine these hypothesis. To explain the serial position effect there are equal number of theoris. According to the Lepley-hull theory the inhibitions operate in a classical conditioning model. The conditioned stimulus for any item consists of the attribute of the very preceding item, (as in the chaining hypothesis) and traces of these attributes are found in all succeeding items in the list. In our list from item a to g, (a enters into association with b via a positive excitation and as a *trace* for all the others in the list.

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In other words, for response b to occur with the stimulus a, all others must undergo a delay or inhibition of delay. Thus for the association a to b, c, d, e, f, and g must undergo the inhibition of delay until their appropriate position is reached. Therefore, for a-b there are 5 inhibitions. Similarly calculated Items b to c have inhibition for d-e-f- and g plus traces of 'a' in these items which makes 8 sources of inhibition for this association; a and g have zero source of inhibition since these are said to be *independently conditioned.* There have been refutations of this theory and other alternatives have been advanced (McGrary and Hunter, 1953, Braun and Heymann 1958) by the theory of response integration and *forward and backward learning* occurring at differential rates (Jensen, 1962; Ribback and Underwood, 1950). Under this theory the first item serves as an anchoring point for response integration of the items in both forward and backward directions. Under our symbols, a is learned first, then it is used to integrate in the forward direction a-b then in the backward direction g-a then forward direction ab-c then in the b ackward direction f-ga and so on.

Meaningfulness: As has been pointed out earlier, meaningfulness affects the acquisition of verbal units. Experimentally meaningfulness is defined in two ways. In one set of experimental control the subjects are presented a series of units, one at a time, for a limited interval (say 2 to 4 seconds). They report their first associations i.e. to say the first meaning that might occur to them from the verbal unit. The percentage of subjects getting an association will be a measure of the meaningfulness of the verbal unit. This measure is known as 'association value' of the verbal unit. In a second set of experimental control the subject is given a verbal unit for a given interval (e.g. 60 seconds). He then writes down all the associations occurring to him. When administered in a group the mean number of associations evoked by the verbal unit will be the association value of corresponding verbal units.

Let us see how meaningfulness affects verbal acquisition. Some general findings from exact experiments are listed here. For verbal learning one of the most important measures is rate of acquisition or rate of learning. This is measured in terms of time taken for acquisition as well as number of trials required for acquisition. The curve exemplifying the relationship between meaningfulness and rate of learning is found to be S shaped, that is to say if we construct lists consisting of verbal units increasing in meaningfulness and compute the rate of learning corresponding to them, the maximum effect will be seen on the middle range of association values. Differences in the rates of learning at extremes of the dimension of the meaningfulness is about three times, e.g., if a list is constructed of units of a very low meaningfulness like RXQ, another of very high meaningfulness like BEL, the later will be learnt three times as rapidly as the former. Another interesting finding in terms of meaningfulness is from paired associated presentation. It will be recalled that in the passed associates there are stimulus components and response

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components. It is possible to vary the meaningfulness of stimuli and responses independently in different experimental conditions. When the meaningfulness is varied within a specific range for both stimuli and responses the rate of learning is more affected by change in meaningfulness in responses rather than the stimuli. Such findings and others like them point out a significant fact about verbal learning. Verbal learning occurs in at least two stages. During the first stage the subject tries to learn the responses. During the second stage he associates these responses to the corresponding stimuli. The association value of the stimuli therefore, should primarily influence the second stage while association value of the response should affect both the stages. Just how the differences in meaningfulness produce differences in the rate of learning is however, a matter of debate. Although meaningfulness is a subjective phenomenon, it can be measured experimentally through controlling 'experience'. Experience can be defined as familiarity through frequency of occurrence. For instance, we can say that the higher the association value of a verbal unit the greater is the frequency of occurrence for that subject or group of subjects. Greater the frequency of occurrence of a verbal unit in a written language therefore, the greater will be its association value. This is also true of nonsense syllables when viewed as parts of words. Further, if under laboratory conditions some previous experiences are provided almost the same effects are obtained. The greater the frequency the easier the subsequent learning of verbal units. This position obtains indirect support for all sets which use sentences having varying degrees of approximation to the structure of a given language. It has been seen that closer the approximation to any actual structure the easier they are for learning.

Intra-list similarity: Another general finding about rate of learning is with reference to intra-list similarity. It is seen that higher the intra-list similarity, the slower will be the acquisition. Experimentally similarity is varied in nonsense syllables and consonants by non-systematic duplication of consonants. The fewer the number of letters used in the list, the greater will be the similarity. In other words, differences in the similarities of meanings are used for these studies. The common sense explanation for such a phenomena is that there is confusion in the mind of the subject as to 'what goes with what', thus if in a paired associate list we put the word 'unclean' in one and attach the word 'dirty' as its response, then the subject cannot use the difference in meaning as a cue for differentiation. Technically speaking, the inverse relationship between intra-list similarity and rate of learning results from interference produced by generalisation among stimuli or generalisation among responses. This is similar to stimulus generalisation and response generalisation in conditioned reflex learning. In paired associate studies it has been seen that variation of intra-list similarity among responses produced lesser change in the rate of learning than corresponding variation of stimuli. This is probably because by such a process the response-recall stage referred to earlier is facilitated even though it has a

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possibility to retard association with specific stimuli. As will be obvious the effect of intra-list similarity increases as the meaningfulness decreases. The difficulty with intra-list similarity decreases if the grouping and arrangements are done in such a manner that units are presented with similar items. For example, if we have a 12 item list and arrange them in blocks of four having similar meanings, its learning will be more rapid than random presentation of the same 12 item list.

Affectivity: This is another phenomenon which is extensively stated in verbal learning. Originally researchers were interested to test Freud's repression theory. If certain words are more unpleasant and certain words are more pleasant then the latter should have a better possibility for learning. Accordingly some words are first rated by the judges. Words like *vomit*, *death* etc., are unplesant and words like *love*, *mother* etc., are pleasant. From comparative analysis however, no consistent evidence exists that lists varying in affectivity can produce different rates of learning.

Transfer: In verbal learning three major phenomena, namely acquisition, retention and transfer are studied. Transfer is defined as usability of one learning in another situation. A transfer is said to be *positive* if an earlier learning experience facilitates the later learning and *negative* if vice versa. If a subject is made to learn one list a day for several days, his performance on the last day will be markedly superior to that on the first day. The improvement may be as much as double the rate after 8 days. This is a phenomenon which is called by Postman as 'learning to learn'. Effects of this nature are greater in serial rather than in paired associate learning. It has been found that higher the degree of the first task learning the greater is the positive transfer. Maximum positive is observed on the first few trials of the second list. Similarly between two responses, one in each list, has very little effect; unless high similarity exists between the stimuli paired with the same response we do not find any appreciable transfer. Similarity between stimuli in two paired associate lists cannot produce positive transfer. If stimulus similarity is high and response similarity is low this will produce negative transfer.

Mass versus distributed practice: Mass practice is defined as a practice having a few seconds between trials e.g. (2 seconds) Distributed practice involves longer inter-trial gaps (say 30 seconds). Distributed practice has been recommended as the most economical for any acquisition but recently it has been found that distributed practice will enhance serial or paired associate learning under two conditions. (*a*) presentation rate of each item within a trial must be fairly rapid (say two to four seconds) and (2) interferences must be relatively heavy as in intra- or inter-list similarities. Distributed practice obviously takes more time. If time is kept constant, no positive effect is seen. However, distributed practice is advantageous for a longer list.

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Some basic theoretical problems: What conditions must be fulfilled before verbal associations can be formed? From 1930 s onwards there have been many investigations into factors affecting rate of association formation. More recently there has been a concern with a *memory repository*. Memory traces do exist as physical entities in the cerebral cortex. The main concern of researchers has been to establish whether verbal learning is *determined* and whether *structural changes* in the neurons is involved. The central nervous system must have the memory traces in some way. Through brain operations, by exciting the cerebral cortex with weak electrodes under ultra violet plants, it is known that the subject can report all his experiences fairly accurately, yet we know precious little about the nature of the memory traces. However, there are to be two major characteristics wherever the central nervous system might have the memory traces. Firstly, the verbal units having some form of similarity and strong association with each other ought to be grouped together. Secondly, within a given grouping the most available response should be that which has been most frequently experienced. Through these explanations we are able to understand certain facts like the role of meaningfulness in the response learning phase, but how two units from different groupings become associated remains unsolved if we take only the neurophysiological explanation. There have been other explanations like 'associational aids' or mediation between stimuli and responses. These explanations also beg the question regarding the manner in which the mediators themselves enter into verbal association. There are two major approaches to all learning phenomena. One is called the *neobehaviorist approach* explaining all learning through either neuro-physiological connections or through reinforcements. The other explanation is called the *cognitive approach* which tries to explain learning through perceptual patterning and insightful solutions. A number of studies wanting to verify the appropriateness of either approach to verbal learning have been conducted.

Researches in verbal learning are presently shooting out phenomena and theory which are touching, sometimes in a very fundamental way, all the areas of human learning from simple conditioning to the study of thought processes (Underwood 1964). The results of investigations in verbal learning are affecting other areas of psychology like clinical psychology. For example, it has been found that greater negative transfer occurs in schizophrenics (Kausler, Lair and Matsumoto 1964) in certain transfer paradigms. Similarly, we can find significant contribution of verbal learning investigations to a attitude learning, motor learning and psycholinguistics etc. Thus verbal learning calls for more attention from all researchers connected with human behaviour.

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References

Braun, H. W. and Heymann, S. P. 'Meaningfulness of material, distribution of practice and serial-position curves' *J. Exp. Psychol.*, 1958, 56, 146-150.

Ebbinghaus, H. uber das gadachtnis: untersuchurgen Zur experimentallen Psychologic, Dunker and Humbolt, 1885.

Tansen, A. R. Transfer between paired associate and serial learning J. Verb Learn. Verb Behav., 1962, 1, 269-280.

Kausler, D. H., Lair, C. V. and Matsumoto, R., Interference Transfer Paradigms and the Performance of Schizophrenics and Controls', *Journal of Abnormal Social Psychology* 1964, 69, 584-87.

McGray, J. W. and Hunter, W. S. serial position curven in verbal learning Science (1953), 117, 131-134.

Ribback, A. and Underwood, B. J. An Empirical explanation of the Skewness of the bowed serial position curve J. exp. Psychol 1950, 40, 329-335.

Underwood, B. J. The representativeness of role verbal learning. In C. N. Cofer (Ed) *Verbal learning and verbal Behaviour*, New York McGraw Hill, 1964.

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A SEARCH FOR PANCHRONIC FEATURES OF INDO-ARYAN NASALS

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0.0. The present paper is an attempt to establish some panchronic invariants in respect to nasals and nasalization process from within the parochial characteristics which different dialects of Indo-Aryan (IA) display. Although the observations are confined only to certain aspects of nasals and nasalisation processes and the data is drawn only from the IA languages, an attempt has also been made to formulate higher generalisations so that from the uniformities of universal scope, idiosyncracies of languages may be drawn.

0.1 Old Indian grammarians have set three distinct categories in respect to nasals and nasalisation process—(*a*) *nāsikya*—a cover term for nasal mutes (*b*) *anusvāra*- a cover term for preconsonantal homorganic nasals and (*c*) *anunāsika*- a cover term for nasalized vowels. As there is a fair amount of discord as to the use of the terms anusvāra/anunāsika in the earlier writings of Indian grammarians, it is advisable to define first the scope and meaning of these terms as ground-work for further discussion here.

0.2 Nāsikya has been accepted here as that nasal segment which when represented on the level of dictionary representation, shows some attributes related to the point of articulation. Furthermore, MS- rules which map dictionary representation of nāsikya onto the systematic phonemic representations are not conditioned by the syntagmatic relations of the segment concerned.

On the other hand, anusvāra and anunāsika, as a group, can be opposed to nāsikya in two respects; firstly, they are 'conditional' segments and can be realized only on the basis of their syntagmatic relations and secondly, on the level of dictionary representation, they differ from nāsikya in their feature complex by not showing any attribute related to the point of articulation.

Anusvāra has been accepted here as a cover term for those nasal segments which though on the dictionary level of representation is a nasal archisegment but is actualized in the form of homorganic nasal. Anunāsika, on the other hand, is the cover term given to those nasal segments which like anusvāra appears as a nasal archisegment on the level of dictionary representation but is realized as a nasalized vowel.*

* It is interesting to note that ancient Indian grammarians have observed that the same basic linguistic unit (i.e. nasal archisegment) underlines both the cases of realisations—anusvāra and anunāsika. This has been more clearly

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0.3 In order to understand the real nature of nasals and nasalization process and have a clear and non-ambiguous discussion on this subject, it is important to let one term stand for one particular unit and further, the unit be defined by the place it occupies on the defined level of representation.

The real limitation in the treatment of nasal segments by Indian grammarians lies in the fact that the same term has been left to stand for the units of different level of representations. For example, Atharvaveda Prātišākhya uses the term *anunāsikya* which stands for both—nasal archisegment, as well as, its actualized variant as a nasalized vowel. Taittarīya school uses the term anusvāra ambiguously to designate nasal archisegment, and its realized variant as a homorganic nasal. Similarly, in Ṛgveda Prātišākhya the term *nāsikya* stands for nasals, nasal archisegment and nasal vowels.

In this paper, terms like nāsikya, anusvāra, anunāsika etc. will be used as defined in section 0.2. We will employ the sign N to mean any nasal sound whereas N* will stand exclusively for nasal archisegment.

A. Nasikya (nasal mutes)

1.0 (*a*) Every IA language has atleast two nasal mutes in its inventory.

(*b*) The two nasal mutes are invariably bilabial *m* and dental *n*.

This attests the fact that the existence of non-anterior nasal sounds presupposes the existence of anterior sounds. In other words, non-anterior sounds like ɳ etc. require solidarity with anterior sounds like m and n. This solidarity is not reversible.

1.1. (*a*) Frequency of m and n is always greater than other nasal sounds. The distribution of these two nasal sounds is less restricted than non-anterior nasal mutes.

(*b*) Amongst the bilabial and dental nasal mutes, the frequency of dental nasal is higher than the bilabial one.

1.2. Nasal mutes presuppose the presence of corresponding oral obstruents.

1.3. Phonologically, nasal mutes are always voiced.

1.4 (*a*) Phonologically, there appear to be only three sub-types of nasal mutes—pure nasals, aspirated nasals and palatalized nasals.

brought into notice by Varma (1961:148)—'In both cases it is the *m* that has led to a particular change; in both cases no original nasal vowel has been acknowledged. It is a 'conditional' sound, appearing only under certain conditions, or, as the Cārāyanīya Siksa would have it, Anusvāra is a dependent sound, which can manifest itself only on the basis of another sound. In the same way Kaccāyana, in his Pali Grammar, terms the Anusvāra as Niggahīta or arrested *m*. Whether the *m* is arrested, dropped, or changed, it is essentially the same phenomenon, termed as Anusvāra by Pāṇini, Niggahita by kaccāyan, and Anunāsika by the Atharvaveda Prātišākhya.

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(*b*) The form of aspirated and palatalized nasals is invariably the outcome of historical development of N+(c)h or N+S (where S=any sibilant) and N+i/y respectively. (Cases of borrowing is excluded here).

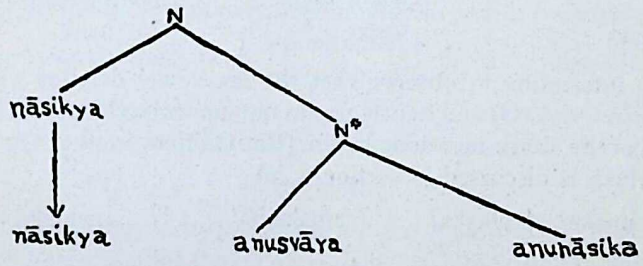
B. Nasal Archisegment (N*)

2.0 In every language of IA family, the dictionary representation of lexicon attests the presence of N*.

2.1 N* may be realized in a language as anusvāra or anunāsika or as both.

When N* is realized as both—anusvāra and anunāsika, they create stylistic indices within the monolythic aspect of a language or they reflect the diatopic differences on the spatial dimension of the language usage. (Srivastava: 1969).

Taking 2.0 and 2.1 into consideration, one may conclude that the distinction within nasals for IA languages is invariably bifold on the level of dictionary representation (i.e. nāsikya vs. nasal archisegment) while on the level of systematic phonemic representation it may be two or three fold. Schematically, it may be represented as below:



2.2 The occurrence of N* is confined to the position V—(CV) i.e., they occur in a post-vocalic position followed by a consonant or a morpheme boundary.

All those instances of contrasts which have prompted linguist's like Pandit (1957), Cardona (1965) Kelkar (1968) etc. to hold the view that N* does not exclusively occur in V—C position, are infact based on the evidence of minimal pairs which are phonetic (rather than phonemic) in nature.

It has been shown elsewhere (Srivastava: 1969) that all those instances which contradict the exclusive occurrence of N* in V—C position, can, on the basis of the underlying representation of lexical items, be divided into two groups: (*a*) the phonetically realized nasal is not a nasal in phonological representation and the realisation of this segment is conditioned by a Sanskrit sandhi rule which may be represented as in Rule 1.

P-Rule 1.

$$\begin{bmatrix} +\text{cons} \\ -\text{voc} \end{bmatrix} \rightarrow [+\text{nas}] \qquad /\text{—} + [+\text{nas}]$$

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and (*b*) in underlying representation, a lax vowel exists between the nasal and the following consonant i.e. the V-V rather than the V-C condition is attested. The mapping of V-VC structure unto V-C is governed by the lax vowel deletion rule (P-Rule 2).

$$\text{P-Rule 2.} \quad \begin{bmatrix} V \\ -\text{tns} \\ +\text{low} \end{bmatrix} \rightarrow \emptyset \,/\, (C)\ VC - \left(C \begin{bmatrix} V \\ +\text{tns} \end{bmatrix} \right) \neq$$

It should be pointed out that in those languages where phonetically minimal pairs create asymmetrical distribution of nasals, there exist P-Rules 1 and 2. For example, phonological representation of the word meaning 'gleam/brightness' in Hindi (H), Punjabi (P), Gujarati (G) and Marathi (M) is the same/camaka/but the phonetic realisations of this lexicon is different in transitive (Tr) and intransitive (It) forms.

Lexicon		$Verb_{Tr}$	$Verb_{It}$
	H.	[camkānā]	[camaknā]
/camaka/	P.	[camkāuṇā]	[camakṇā]
[camak]	G.	[camkāvū]	[camakvū]
	M.	[camkāviṇē]	[camakṇē]
-mak-		-mk-	-mak-

It is interesting to observe that the lax vowel deletion rule is not operative in Oriya (O) and hence, we do not get -mk- cluster in the transitive form of the above-mentioned verb. (But O offers another type of complexity which is discussed in section 3.2c)

O. /camaka/ [camaka] $[\text{camakāiba}]_{Tr}$ $[\text{camakiba}]_{It}$

It is apparent that phonetically realized minimal pairs like (sankī)—$(\text{saŋkā})_H$, (jānki)—$(\text{vāŋki})_G$ or (ḍaṇkā)—$(\text{daŋkā})_M$ cannot be said to form minimal pairs creating asymmetrical distribution of nasals.

C. Anusvāra

3.0 The phonetically realized variant of N* in the position V-≠is invariably bilabial nasal [m].

3.1. (*a*) The anusvāra realisation rule of N* in the environment of V—$\begin{bmatrix} +\text{obstruent} \\ -\text{cont} \end{bmatrix}$ is the same in all languages of IA family. The rule may be formulated in form of P-Rule 3.

P-Rule 3.

$$[+\text{nas}] \rightarrow \begin{bmatrix} +\text{obstruent} \\ -\text{continuant} \\ \alpha\ \text{high} \\ \beta\ \text{coronal} \\ \gamma\ \text{distributed} \end{bmatrix} \Big/ \quad V - \begin{bmatrix} +\text{obstruent} \\ -\text{continuant} \\ \alpha\ \text{high} \\ \beta\ \text{coronal} \\ \gamma\ \text{distributed} \end{bmatrix}$$

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(*b*) It is only in the environment of

$$V\text{——} \begin{bmatrix} \alpha\text{vocalic} \\ \alpha\text{consonantal} \end{bmatrix} \text{ or } V\text{——} \begin{bmatrix} +\text{obstruent} \\ -\text{continuant} \end{bmatrix}$$ that the

anusvāra realisation rule varies from language to language or even style to style within the same language. In other words, P-Rule 3 is a panchronic rule for IA languages but the anusvāra rule may be different when a N^* occurs before semivowels and liquids or sibilants and back fricatives.

For example, N^* may be realised as a fully assimilated nasal segment before semivowel and liquids (as in Sanskrit) or as a nasal segment restricted in assimilation to the features related to the point of articulation while in respect to the major class features they form a feature

$$\text{complex} \quad \begin{bmatrix} -\text{vocalic} \\ +\text{consonantal} \end{bmatrix} \quad \text{[as in Hindi]}$$

(*c*) Most of the IA languages has anusvāra realisation rule which maps N^* unto systematic phonetic representation as a homorganic nasal even before sibilants and back fricatives. But some of the new IA languages offer fragmentary and inconsistent evidence as N^* is realised as ŋ irrespective of the place of articulation of the following consonant. Some of the lexical items of Oriya and Bengali defy the homorganicness of the nasal preceding before a segment which is $\begin{bmatrix} +\text{obstruent} \\ -\text{continuant} \end{bmatrix}$ (Pattanayak: 1966, 44-5).

Thus, the lexical item for 'meat' in Oriya, Assamese, Bengali and Hindi has -VN^*s-in dictionary representation, but is realised as

$$[\text{-V}\eta\text{s-}]_{O/B}, \quad [\bar{\text{V}}\eta\text{x-}]_A \text{ and } [\text{-}\bar{\text{V}}\text{S-}]_H$$

It is interesting to note that the vocalic variant of N^* mainly occurs in Sanskrit before sibilants and h. (Williams: 1864, 6; Emeneau: 1946, Allen: 1953, 40; Chatterji: 1960, 70). Atharvaveda Prātiśākhya recognizes this nasal vowel in this context. This process may be formalized as in P-Rule 4.

$$\text{P-Rule 4} \qquad V \xrightarrow{1} [\text{nas}] \;/\; \text{——}N^* \begin{bmatrix} -\text{syllabic} \\ \alpha\text{consonant} \\ +\text{continuant} \\ -\alpha\text{voice} \end{bmatrix}$$

Contrary to this, phonetic treatises of Taittirīya School, the Vaidikābharaṇa, the Sarvasammat śikṣā, and the Yajuṣbhuṣaṇa, hold the view that it is not the preceding vowel, which is nasalized and later N^* is deleted but N^* itself is actualized as a velar consonant i.e. P-Rule 4′ is operative.

P-Rule 4′

$$N^* \longrightarrow \begin{bmatrix} -\text{syllabic} \\ +\text{back} \\ +\text{high} \\ -\text{continuant} \end{bmatrix} \Big/ V \text{——} \begin{bmatrix} -\text{syllabic} \\ \alpha\text{consonant} \\ +\text{continuant} \\ -\alpha\text{voice} \end{bmatrix}$$

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P-Rule 4 and 4′ may be understood as a case of dialect variation. Oriya, in fact has the P-Rule 4′ rather than the common anunāsika (vowel nasalisation rule).

3.2 The nasal realization rule for anusvāra (as stated in 3.0 and 3.1) operates as a MS-rule when applied within the morpheme structures and the same rule functions as a P-Rule when given to operate across morpheme boundaries.

D. Anunāsika

4.0 The nasal archisegment N* in the structure -VN*C- may be realized as -$\bar{V}$C-

The observation of Ferguson (1963:59) that nasal vowels, 'apart from borrowing and analogical formations, always result from loss of a PNC' (primary nasal consonant), may be modified for IA languages taking into consideration the fact that it is -VN*C rather -VNC- which gives rise to the nasalized vowels. The following table attests our view.

Old IA	-VC_1C_2-	-VCN-	-VN_1N_2-	-VN*C-
	sapta	*karma*	*janma*	*danta*
	↓	↓	↓	↓
Middle IA	-VC_2C_2-	-VNN-	-VN_2N_2-	-VN*C-
	satta	*kamma*	*jamma*	*danta*
	↓	↓	↓	↓
New IA_1	-$\bar{V}$C-	-$\bar{V}$N-	-$\bar{V}$N-	-$\bar{V}$C-
	sāta	*kāma*	*jāma*	*dāt*

4.1 In case, anusvāra and anunāsika both are phonemic structures in a given language, only one can be marked with [+native].

(*a*) Indo-Aryan languages can be divided into three sub-groups; -IA_1 which has anunāsika as a phonemic structure which is native, IA_2 which has anusvāra as a phonemic structure which is native, and IA_3 where anusvāra and anunāsika as structures are in complementary distribution.

(*b*) It is important to note that IA languages display a significantly rich case of mutual borrowing due to social mobility, cultural fusion and verbal interaction within and across different dialects. Different realisations of lexical items of New IA having N* in underlying representations can be better explained if the items are divided into three categories.

[+Skt. —native]	[+native]	[—Skt. —native]
A	B	C

For example, in languges of New IA_1 group (H, G. M.B. etc.) the systematic phonetic representation of lexicon falling under category B, does not show any case of anusvāra. Words falling under category A and C may show occurrences of anusvāra but in no case, display an instance of anunāsika. For New IA_2 group (Punjabi and Lahanda may be taken

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as representatives of this group), anusvāra is a structural feature for B and A while instances of anunāsika is strictly restricted to the category C.

Thus, anusvāra and anunāsika, as structural features stand in different relationship in respect to the diacritic feature [native] for New IA_1 and IA_2 sub-groups; for former, it is $\begin{bmatrix} -\alpha\text{anusvāra} \\ \alpha\text{native} \end{bmatrix} / \begin{bmatrix} \alpha\text{anunāsika} \\ \alpha\text{native} \end{bmatrix}$ while for the latter, it is $\begin{bmatrix} \alpha\text{anusvāra} \\ \alpha\text{native} \end{bmatrix} / \begin{bmatrix} -\alpha\text{anunāsika} \\ \alpha\text{native} \end{bmatrix}$

For example, compare the different actualisation of words in New IA_1 (Hindi) and New IA_2 (Punjabi and Lahanda) having identical phonological representations (with a diacritic feature [+native]).

/daNta/ 'tooth' ⟶ $[dãt]_H$, $[dand]_P$

/kaNṭā/ 'thorn' ⟶ $[kãṭā]_H$, $[kaṇḍā]_P$

At the same time, Hindi has [bhaŋg] and [dant] forms and Lahanda has in use words like [khẽda] 'eating', [cẽda] 'rising'. [rãgla] coloured. These words will have to be marked [—native] in the lexicon.

(*c*) The above discussion leads us to posit nasal archisegment N* in the underlying representation of lexical items of IA languages (irrespective of the subgrouping and subclassification) wherever a nasal is immediately preceded by a vowel and followed by a consonant. This makes the underlying representation of most of the corresponding words similar. Thus, word for 'thorn', though differs in systematic phonetic representations in different New IA languages—$[kaṇḍā]_P$ $[kaṇḍā]_L$ $[kãṭā]_H$, $[kãtā]_B$, $[kaṇṭā]_O$, $[kãṭo]_G$ $[kãtā]_M$, in systematic phonemic representation they have the same—VN* C— structure.

References

Allen, W. S. 1953. *Phonetics in ancient India.* London: Oxford University Press.

Cardona, G. 1965. *A Gujarati reference grammar.* Philadelphia: University of Pennsylvania Press.

Chatterji, S. K. 1960. *The pronunciation of Sanskrit.* IL. 21. 61-82.

Emeneau, M. B. 1946. *Nasal phonemes of Sanskrit.* Language 22. 86-93.

Ferguson, Ch. A. 1963. Assumption about nasals; A sample study in phonological universals, in *Universals of Language*, ed. by J. H. Greenberg, Cambridge, Mass.

Kelkar, A. R. 1968. *Studies in Hindi and Urdu*, I. Poona: Deccan College.

Pandit, P. B. 1957. *Nasalization, aspiration, and murmur in Gujarati.* IL 17. 165-72.

Pattanayak, D. P. 1966. *A controlled historical reconstruction of Oriya, Assamese, Bengali and Hindi.* The Hague, Mouton.

Srivastava, R. N. 1969. *Review of Studies in Hindi-Urdu*, by Kelkar, Language 45. 913-927.

Varma, S. 1961. *Critical studies in the phonetic observations of Indian grammarians.* (Indian Ed.) Delhi.

Williams, M. 1864. *A practical grammar of the Sanskrit Language.* Oxford: Clarendon Press.

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COMPUTATIONAL LINGUISTICS AND SPEECH SYNTHESIS*

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1. Introduction

One of the most powerful tools of research in the 20th Century is perhaps the digital computer. The computer has entered almost in all fields of research. Because of its versatility and extensive usefulness for solving problems using appropriately written programmes and because of its high speed of execution of programme steps, the computer has been used more and more by researchers. The usefulness of the digital computer in linguistic research is perhaps less known in India than abroad. Lamb [1], Kucera [2, 3] and others have provided a description of 'The Digital Computer as an Aid in Linguistics'. We have also dealt with this subject elsewhere [4].

For CDC 3600 programming letters A to Z, numerals 0 to 9, special symbols like + — = /$ *., ( ) are available to a user and using these symbols he writes his problem solving steps (programme) in a higher level language like FORTRAN (abbreviation for Formula Translation). These instructions are converted by the computer into machine language programme (digital representation) automatically and executed. The programme is fed to the computer through normally what is called a card-reader, therefore, the programme is in 80-column cards.

It is enough for a linguist to know how to represent a linguistic problem in FORTRAN or any other suitable programming language rather than learning about the working of a computer. The problem solving procedure given in a computer-handled language is known as a programme. In general except for statistical studies involved in linguistic research, normally, the problems are of logical type. For example, let us assume that one wants to list all words containing a sequence/mb/in English. Assuming that one searches a text or dictionary, what we normally do is to take the first word of the text/dictionary and search whether there is a /mb/ sequence present. If we find /mb/ in the word we note down the word in a sheet of paper, otherwise, ignore the word. We repeat this process for all words of the text/dictionary until we have exhausted all the words. This is a very time-consuming and tedious type of work, and one gets tired very soon. Suppose one wants to do this using a computer, one writes a programme which enables the computer to do this job very quickly, may be in a few minutes. In the programme, one asks several questions, such as, Is the first word encountered?

* This paper is based on a talk given by the author at the Summer School of Linguistics, Mysore, 1970.

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If the answer is yes, is the first letter /m/?- if the answer is no, is the second letter /m/? if the answer is yes, Is the third letter /b/? if the answer is yes, we have found the sequence /mb/ in the first word, hence we ask this word to be printed out. We repeat this procedure to the end. What we note here is that we decide about the step by step procedure for the analysis and at each step we take a decision as to the course of action that is to be taken next. When this step by step procedure is written in a programming language without errors, the computer executes the programme efficiently, and fastly handling huge data. Analysis of raw field data for phonemic, phonetic, syllabic structure and distribution, testing of rules of —grammar like generative grammars, dictionary preparation and alphabetization, various types of information retrieval such as search for prefixes, suffixes, given sequences of letters and so on are some of the areas where computer could be used extensively. Thus one finds a digital computer as a powerful tool in linguistic research. In computational linguistics one studies the various aspects of the linguistic problems, methodology and related matters. We shall see now what we mean by computational linguistics in the next section.

2. Computational Linguistics

The areas of studies under computational linguistics according to Kuno *et al* [5] Kuno [6], and Oettinger [7] are:

(*a*) Mathematical Characterization of natural languages,

(*b*) Developments of Computer programmes useful for linguistic research and

(*c*) The application of linguistic techniques to computer problems.

Survey of research in the entire area of computational linguistics is beyond the scope of this paper and may be found in Kuno [4], Oettinger [7, 8] and Bobrow *et al.*[9] We give below only a sketch of each of the above topics, though the computer programmes for linguistic research will be dealt with at some length.

2.1 *Mathematical Characterization of Natural Languages*

Under this topic, there are two types of studies possible depending upon the type of mathematics used therein (1) Statistical and (2) logic or discrete mathematics.

Frequency count of linguistic units such as phones, phonemes, syllables and words, statistics of style, authorship identification and quantitative studies of generic relationships between languages are some of the problems studied under 'statistical methods'.

Formal characterization of the phonology, syntax and semantics of natural languages come under the domain of logic or discrete mathematical studies.

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2.2 *Developments of Computer Programmes for Linguistic Research*

A very important aspect of computational linguistics is the developments of computer programmes useful for linguistic research. While for the study of mathematical characterization of natural languages, a linguist should be a good mathematician also, development of computer programmes normally does not require knowledge of mathematics in the above sense. Hence it is worthwhile to go into some of the details of such an area, here.

The statistical studies of linguistic units, a concordance—an index which lists the occurrences of each key word in a text, often with its immediate context (environment), testing the rules of grammars such as transformational grammars as and when they are formulated, information retrieval such as listing all words having a given prefix, words ending in a given suffix and so on, listing words with a given sequence of letters from a text/dictionary and so on are best achieved efficiently by computer programmes.

The availability of graphical input-output system with major computer centres should enable the users for inputting and outputting non-standard characters just as Devnagri or Tamil script materials directly to computer using appropriately written programmes. No such progamme is immediately available in India. A computer-controlled plotter generated Devnagri script programme at TIFR had been developed by Andres *et al* [10]. Elsewhere Chinese text analysis programmes have been developed and the details may be found in Walker [11].

Models of grammar used for description of natural languages are becoming more and more complex. Hence it becomes increasingly difficult for the linguist to test rules of grammar that he formulates. Bobrow *et al* [12] have described a system for phonological rule testing. A programme called TRANSFER developed at TIFR also uses rules for the conversion of English Orthography into phonetic output suitable for speech synthesis. Rules are provided for the conversion of each letter in all environments and on the basis of the syllabic structure of each word, automatically stress rules are applied thus assigning stress to proper syllables and so on.

Information retrieval from a dictionary or a concordance is of great utility. For example, we have developed at TIFR a programme called WORDHUNT, which searches all the words with a given sequence of letters and prints them. While the programme for English Orthography conversion is in progress, several times we would like to test for how many words a given rule would apply. Further, are there any exceptions to the rule? For this purpose one requires a list of all words containing the given sequences of letters in all contexts. For example, a list of words containing the sequences /-nger/ suggest that in general /-nger/ becomes/ /-njer/ in almost all the words, but exceptions are also found such as the

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words: finger, monger, anger and so on. Finding out the exceptions becomes easy once one has the exhaustive list of words available. In order to facilitate rapid search fastly, there is a programme called FONOLOGY developed at TIFR. This programme arranges a dictionary on file by file basis. In other words, all words containing say the letter 'a' will be alphabetically listed under 'file A' and so on. Though words may be repeated in more than one file, this arrangement seems to be economical from the computer memory allocation point of view. The above programme also gives you a frequency count of each letter with left and right context. Another programme called FREQUENCY has been developed at TIFR, which was used by some Bombay University students for their field-data analysis. In this programme one gets not only a complete phonetic distribution and frequency count, but also syllabic structure for each word and each syllabic type counted properly and listed in an increasing order and the alphabetization of the data as a dictionary. In less than 4 minutes nearly 2500 words of each student's data was completely analysed.

A similar programme for dictionary preparation is currently being written by Andres of the Summer Institute of Linguistics, Poona. A pamphlet issued by the SIL [13] may be useful to the linguist, wherein the availability of 'computer support of linguistic field work, basic concordance programme' of the university of Oklahoma computer laboratory is described.

Speech communication with computers calls for a closer co-operation between linguist and computer-based speech researchers. The problems of synthesis and recognition of speech are very complex, involving acoustic and linguistic rules. Formulation of rules for synthesis at phonetic/phonemic level is crucial for the synthesis of a given dialect. In recognition, the role of the systematic linguistic hierarchy, redundancy at each such level and related matters are less known. Hence there is a wide scope for research in this direction using computer aided tools. We shall give a rough sketch of speech synthesis programme in Section 3.

2.3 *The application of linguistic techniques to computer problems*

This area involves problems of automatic translation, automatic information retrieval and question-answering, production of computer generated abstracts, indexes, and catalogues, the design of languages for computers and so on, using linguistic techniques. Automatic information retrieval includes such matters as command and control, library automation, automatic processing of medical files, automatic medical diagnoses, filing and retrieval using natural or semi-natural language sentences and giving appropriate answers with respect to a data-base stored in the computer memory. Syntactic and semantic ambiguities of natural languages that pose major difficulties have to be tackled first, before such a system could be implemented. Thus the above area has a lot of open problems to be solved, having potentialities for further future developments.

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3. Speech Synthesis

Work in the area of computer-aided speech synthesis has been carried on at TIFR for the last four years or so. Details regarding the speech-synthesizer and its simulation programmes are described in the various publications from TIFR [4,14,15,16,17]. Here we would like to give only details required by a linguist to understand this area of research.

While writing a descriptive grammar or a transformational grammar, or any grammar, a linguist assumes that he will be able to generate well-formed sentences of the language concerned and test it through informants. He assumes that he will be able to present the sentences in spoken forms —i.e., as speech. However, really speaking, no one has ever ventured to try this and the assumption remains open. One might argue that it would be physically impossible for a linguist to sit before an informant and speak all the generated material. Then what is the solution? If we assume that some mechanical device could be developed for the linguist which could be then made to speak the generated material, then the verification processes would be easy. Of course, no such device now exists which can speak perfectly like man in all respects. However, speech synthesis is the first step in that direction.

The second important reason to study about speech using speech synthesis is to understand more about the articulatory processes involved in the production of speech. In linguistics, articulatory phonetics is the foundation for the study of language description. Accordingly, one classifies a sound as bilabial stop, dental stop and so on depending upon the point of articulation involved, or lables a sound as voiced or voiceless depending upon the vocal cords' mode of action—vibrating, or non-vibrating, or lables a vowel as front, central or back depending upon the active part of the tongue involved inside the oral cavity and so on. However, this type of definition has been accepted as a *sine qua non*. If one wants to know whether there is any significance in such a classification on some grounds other than convenience of description, until the speech synthesis schemes were implemented, there was no way of giving any affirmative reply. Speech synthesis studies by Stevens [18], Ramasubramanian *et al* [4] have shown that there is a close relationship between the point of articulation and manner of articulation of a speech sound and its acoustic correlates. It is possible to show now that for a class of speech sounds one can attribute a set of acoustic properties and so on. Thus the speech synthesis is contributing to the understanding of articulatory phonetics.

The next question is about the acoustic properties of speech sounds. In acoustic phonetics one tries to learn something about the acoustic nature of speech sounds in isolation and in contexts, using spectrograms and so on. Until Haskin's laboratory researchers established the minimal cues of speech sounds [19, 20] using a pattern-playback device, it was not possible to know exactly anything about the acoustic cues of speech and verify the same. The hand-painted spectrograms used in the pattern

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playback was really the first step in synthesis. Thus most of the knowledge regarding the acoustic nature of speech and cues stem from the speech synthesis studies.

One of the most important questions in phonetics is the nature of auditory phonetics—the auditory effects of speech. This branch is perhaps not at all studied by a linguist. A major reason may be the non-availability of research tools and theories. However, with the advent of speech synthesis, this area has been investigated carefully. Accordingly, we now know some of the relevant acoustic parameters useful in the identification and discrimination of speech sounds. Several theories of perceptions had been put forward and being currently investigated using synthetic speech. Duration, fundamental frequency for voicing, vowel—consonant differences and so on are investigated at the auditory perceptual level and encouraging results are obtained.

Thus without going deep into the various aspects and usefulness of speech synthesis in linguistic research, one may feel that linguists have got really a very powerful tool—speech synthesis at their disposal. We shall briefly try to outline the synthesis scheme implemented on a computer.

It is well known that corresponding to human vocal organs of speech, electronic speech synthesizers could be constructed. Though the operation of a synthesizer might differ from that of vocal organ, so far as the end product is good speech, one need not bother about the mode of operation and construction of the synthesizer itself. Hence, let us agree here that articulatory mechanism may be translated into electronic circuit designs—i.e., a synthesizer may be constructed.

The next question is, how to activate the synthesizer just as one would like to activate the articulators to produce speech. A native speaker acquires his language behaviour and uses a set of muscles of the vocal organs to produce speech sounds. In other words, a set of muscles are used to produce one sound and another set (which may include probably some of the muscles of the first set) of muscles for another sound and so on, but all these are co-ordinated in such a way that the sounds are produced continuously and not discretely as isolated sounds. Thus speech seems to be the end product of continuous movements of articulators, at the articulatory level at least. The instructions to activate the right type of muscles may come from speech center in the brain. Analogically, it is quite conceivable that one can activate a synthesizer by a set of control rules and the rules are formulated in such a way that the synthesizer produces continuous speech. Secondly, when we transcribe (as linguists) the speech of some person and using phonetic transcription (or for that matter phonemic transcription) we do not record the quality of speech produced by the informant, his age, sex and other characteristics. What we simply do is to note these facts in the beginning and forget about it conveniently while proceeding with the transcription. Further, we represent the observed articulatory gestures in terms of phonemes. In other words, a set of articulatory features of a speech sound is represented by a single

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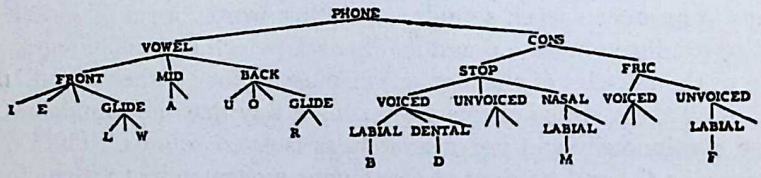
symbol, as though only one sound is produced/heard at a time. This is further refined at the phonemic level, based on phonemic principles. Therefore, if one says that he has a set of symbols that could be used in synthesis, for a given language (speech) and that those symbols are classified into various groups, each group having certain acoustic properties, then as linguist we have to agree with him. This is quite easy too.

Thus, in speech synthesis, first one defines all the symbols that may be used in the synthesis process (any other symbol undefined will be rejected by the synthesis programme). Secondly, these symbols are classified as groups—such as vowel vs. consonant. Vowels are further classified as front, central or back. Laterals, trill, continuants are regarded as glides—i.e., vowel like sounds, hence classified with vowels. Next, consonants—stops vs. fricative are taken up. Stop is classified further into bilabial, dental and so on. From Figure 1 (a), one can understand that the classification given in our speech synthesis scheme resembles very closely the classification done in linguistics. Thus any symbol gets a set of attributes—for example, /p/ is called consonant, stop, bilabial, voiceless and non-nasal. Before we go into the details of the significance of such a scheme, let us try to understand some thing about vowels and consonants in terms of their acoustic behaviour.

Vowels, including glides, have what are known as formants. That is while producing these speech sounds, the oral cavity resonates at particular frequencies (or frequency regions), hence, the outcoming speech wave contains a set of resonance frequencies—formants. Normally, so far, researchers have shown that if one takes a spectrogram of a vowel produced by a speaker, the lower most three formants are sufficient to




```
(PHONE(VOWEL(FRONT( I E EE  )(GLIDE(L L1 L2 W                    )))
              (MID( A AE AIR AR Y AA                              ))
              (BACK ( O OO U UU OR  ) (GLIDE (R R1                ))))
       (CONS  (STOP (LABIAL(UNVOICED(P PH))(VOICED(B BH M MH ))))
              (DENTAL (UNVOICED (T  TH )) (VOICED ( D DH N NH )))
              (PALATAL(UNVOICED (T1 TTH C CH                      ))
                      (VOICED (D1 J JH D1H                        )))
              (VELAR(UNVOICED(K KH))(VOICED(G GH NG               ))))
       (FRIC(LABIAL(F V))(DENTAL(CC S Z TS                        ))
              (PALATAL(SH ZH H                                    ))))
```

Fig. 1 (a). A partial attribute tree and its list structure representation.

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reproduce the vowel using synthesizers. Just as a linguist omits the emotional and personal characteristics, idiosyncracies, age and sex of the speaker from his transcriptions, in speech synthesis, only the first three formants of vowels and vowel like sounds are taken into account. At this stage, no one is able to show the significance of other formants and their function in speech perception, convincingly. While we are talking about formants, it should also be noted that each formant has a certain average amplitude (that is, the height to which a single speech wave at a given frequency may rise) and duration for which the formant is sustained. Thus, each vowel (or vowel like sound) minimally has: (1) Three frequency regions (usually the center of the frequency region or formant is specified), (2) The amplitude (average) of each formant and (3) The duration of the second phonetic segment specified or measured from good spectrograms. In addition, since the centre frequency of each formant is normally specified, and since the formant is a region, each formant is given a width called band-width, which is assumed to be constant throughout the synthesis process.

Next we come to consonants. When nasal stops and fricatives are produced, the nasal and oral cavities produce not only resonance frequencies—formants, but also anti-resonance frequencies—anti-formants. These formants are also specified in terms of their centre frequencies, amplitudes, bandwidths and duration. But when the stops are analyzed, one notes the following:

(1) each stop has silence duration differing from another stop,

(2) each stop has a noise frequency called burst frequency (of course with amplitude, and bandwidth).

(3) the most important factor is that each stop influences the formants of the preceding or following vowels and the direction, and the extent to which the formant transition of the preceding/following vowel takes place determines the identification of the stop.

Thus the identification of vowels, nasals and fricatives in isolation is somewhat possible depending upon their formants etc., the identification of stops are possible mainly on the basis of the transition properties of the formants of vowels. It becomes clear that the effect of the stop on the identification of vowels is also implied. Thus one notices in our synthesis scheme for example, that a class of vowels—say front vowels have certain formant transitions in the context of bilabial stop (which is different from that of dental, retroflex or velar stops). Similarly, the transitions are different for central vowels and back vowels. In addition, even though a bilabial nasal stop may have a formant and antiformant that is different from that of dental nasal stop, the transition behaviour of say front vowels is same as that of non-nasal stop. In voiced sounds, there is a voice formant called F_0. If we remove this, we may produce voiceless vowels (or whisper) and voiceless stops and so on.

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Thus we may summarise the above details as follows:

1. For each sound supply the acoustic detail in terms of duration, formants and amplitude or formants and anti-formants in case of nasals, fricatives etc.) measured from spectrograms.

2. Specify the transition properties of vowels or vowel-like sounds at various consonantal contexts depending upon the consonant class involved.

3. Find out from the rules how the transitions, the duration of the transition, the direction and extent of transition for various sounds are to be handled.

4. Supply a set of rules for (3) above, as well as the classification of symbols.

5. When any string of symbols is typed through the computer typewriter that is to be synthesised (let us assume the symbols represent for the present phonetic transcription), first take each symbol and find out the class to which it belongs, and then pick up its relevant acoustic parameters. Do this for all other typed symbols. Next search rules for the concatenation procedure for the first two symbols from left to right and apply the same generating transitions etc., (as in rule 2, 3 and 4). Continue this process for all the symbols. Now a spectrogram for the speech is obtained (generated).

These became control rules for the synthesizer which is activated and the output of the synthesizer is played through a loudspeaker attached to the computer.

Figure 2 (p. 130) shows how a spectrogram for the word 'INDIA' is generated through speech synthesis. First, parameters for the symbol I, N, D, I and A are found and placed one after another linearly with their respective durations. In the second step (Fig. 2 bottom), the transitions, the duration of transitions etc., are computed through appropriate computer programmes and the spectrogram for INDIA is generated, which is suitably played through a loudspeaker attached to the computer, via the synthesizer simulated.

One may notice that in the synthesis programme given above, the synthesizer, the spectrogram generation and the necessary computation involved therein are all handled by the computer through appropriately written computer programmes. Once the spectrograms are generated, they activate the synthesizer (of course simulated through the computer programme) suitably, whose output is played through the loudspeaker. The linguist supplies the rules for concatenation, classification of sounds and supply their acoustic parameters as external data, which could be modified from language to language without affecting the computer programme itself

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given above. It may be noted that there is provision for intonation, and stress, which operate normally on the fundamental frequency or F_0 and its related properties. As an illustrative example, I give below some rules for the synthesis of say Tamil here [Fig.1 (b)].

Explanation of the rules given in Figure 1 (b) :

The rules are as follows (in general)

1. Duration (increase in duration to be effected for vowels in various contexts).
2. Steady-state (formant change of glides if any in various vowel contexts).
3. Hubs (terminal frequencies for various vowel formants in the context of consonants).

```
°        *        °        °        °        °
(I(10. 280. 10. 2000. 8. 2700. 6.) (0. 280. 10. 2000. 8. 2700. 6.))
(P(12.0) (0.0))
(B(12. 120. 7.) (0.0 120. 7.))
(S(FRIC (4250. 6750. 5250.) (15.0) (0.0))
    .
    ..
    .
    .
RULES
DURATION          2
(.(VOWEL) (UNVOICED) 0.2)
(.(VOWEL) (VOICED)       0.35)
STEADY STATE      2
(.(VOWEL) (GLIDE L) 0.1 0.2 0.1)
(.(VOWEL) (GLIDE R) 0.1 0.2 0.1)
F1HUB             2
(.(FRIC) (VOWEL) 350.)
(.(STOP) (VOWEL) 200.)
F2HUB             8
(.(LABIAL) (VOWEL) 750.)
(.(DENTAL) (VOWEL) 1800.)
    .....
    .....
    .....
```

Fig. (1b) Partial List of Data and Rules

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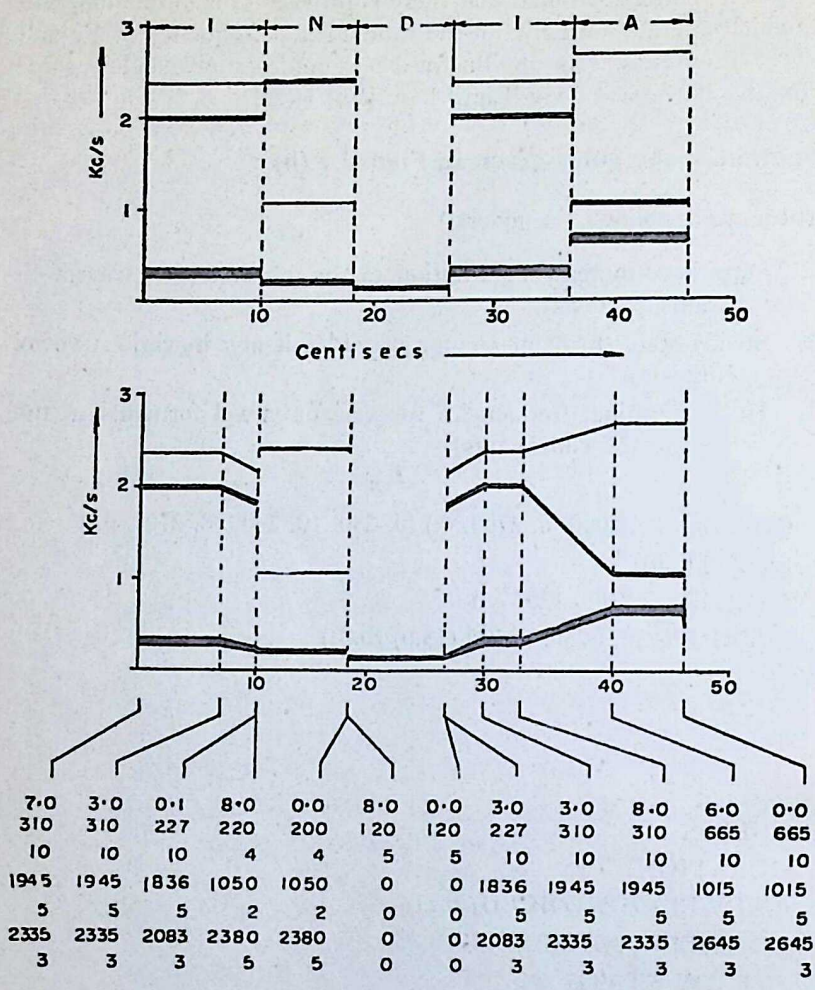

Fig. 2. Schematic spectrogram of the word 'India' before and after concatenation. The spectrum matrix is also shown.

4. Transition time(duration for which transition of various formants of vowels/vowel-like sounds should take place).

5. Transition ratio (specifies the extent of transition of any formant towards the terminal frequencies specified under rule 3).

Rule 1: (specifically given in Figure 1 (b)). Duration rule specifies that when a vowel is concatenated with an unvoiced consonant, the duration of the vowel in question should be increased by a factor of 2 i.e., by 20 per cent and if the consonant is voiced, then the increase in the vowel duration should be by a factor of .35 (35 per cent). The increase will be calculated for the normal duration given for the vowel in question.

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Rule 2: When any vowel is followed /preceded by a glide /1/ or /r/ then the first, second and third formants of the glide are to be shifted upward appropriately then the shift rule is applied.

Rule 3: (*a*) First formant of any vowel should terminate or tend to move towards the frequency 350 Hz (or cycles per second) if a fricative is preceding/following any given vowel and if the consonant is stop then the terminal frequeny should be 200 Hz.

Rule 3: (*b*) When a bilabial consonant is followed by a vowel, the second formant of the vowel should have a termination or tend to terminate at a frequency of 750 Hz. and so on.

Rule 3: (*c*) Specifies terminal frequency region for third formants of different vowels. One may note that in these rules one can specify terminal frequencies for each vowel or a class of vowels as desired. By terminal frequency we mean the frequency region towards which or from which a formant may be supposed to terminate or originate in ideal cases.

Rule 4: This rule specifies that when a stop is followed by a vowel, the transition duration of vowel formants should be 3. cs. i.e. three centiseconds and for a vowel and fricative it is 5 centiseconds and so on.

Rule 5: This rule specifies the transition ratio for a vowel and stop and so on. When a vowel is followed/preceded by a stop, and if the stop say is bilabial then the transition ratio .5 ensures that the vowel formants move towards the terminal frequency 200 Hz specified in rule (3*a*) but stops exactly at the middle without fully reaching the 200 Hz. Thus when the transition ratio is one, then the formant terminates exactly at the terminal frequency specified and so on.

From the above rules one may notice that our classification has enabled us to formulate rules for a class of sounds rather than each and every sound. Though one can specify new sets of rules without disturbing the system itself and the rules are specific for each point of articulation involved.

We have tried to outline above the speech synthesis in a compact manner and many of the details omitted here may be found readily in the various references we have mentioned in this paper.

Conclusion

In this paper we have tried to describe the various aspects of computational linguistics and speech synthesis. This may be considered as an introduction to the fast growing field in modern linguistics. We have not gone very deep into any one of the aspects but have tried to give an overall view of the field rather than details due to shortage of space.

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Acknowledgment

My thanks are due to Shri R. B. Thosar, my colleague for his comments and useful discussions; and to Professor R. Narasimhan for his encouragement and interest in my work.

References

1. Lamb, S. M., The Digital Computer as an Aid in Linguistics, *Language 37*, pp. 382-412 (1961).
2. Kučera, H., A Note on the Digital Computer in Linguistics, *Language 38*, pp. 279-282 (1962).
3. Kučera, H., Mechanical Phonemic Transcription and Phoneme Frequency Count of Czech. *Int. Jour. of Slavic Linguistics and Poetics*, VI, pp. 36-50 (1963).
4. Ramasubramanian, N., *et al.*, On Computer Based Research Tools for Linguistics, *Technical Report 81*, TIFR, Bombay (1969).
5. Kuno, S., *et al.*, Computational Linguistics in a Ph.D. Computer Science Programme, *Mimeographed*, Harvard University (1968).
6. Kuno, S., Computer Analysis of Natural Languages, *Proc. of Symp. in Applied Mathematics*, American Mathematical Society Vol. 19, pp. 55-110 (1967).
7. Oettinger, A. G., Computational Linguistics, *The American Mathematical Monthly*, Vol. 27:2, Part II (1965).
8. Oettinger, A. G., Automatic Processing of Natural and Formal Languages, *Proc. of IFIP Congress 65*, Spartan Book Inc., Washington (1965).
9. Bobrow, D. G., *et al.*, Survey of Automated Language Processing, *Annual Review of Information Science and Technology*, Vol. 2, American Soc. for Infor. Science (1967).
10. Andres, S., *et al.*, A note on Programming a Character Generator for the Deva Nagari Script, *Technical Report 82*, TIFR, Bombay (1970).
11. Walker, G. L., *et al.*, Chinese Mathematical Text Analysis, *IEEE Transactions on Engineering Writing and Speech* (1968).
12. Bobrow, D. G., *et al.*, A Phonological Rule Tester, *Communication of the ACM* (1968).
13. Language Processing and Analysis by Computer, Summer Institute of Linguistics, Poona (India Branch) (1968).
14. Rao, P. V. S. *et al.*, Speech: A Software Tool for Speech Synthesis Experiments, *Tech. Report 38*, TIFR, Bombay (1968).
15. Ramasubramanian, N., *et al.*, Synthesis by Rule of Some Retroflex Speech Sounds, *Tech. Report 67*, TIFR, Bombay (1969) (also to appear in *Language and Speech*, London).
16. Thosar, R. B., A Method of Analysing Formant Transitions, *Tech. Report 57*, TIFR, Bombay (1968).
17. Mantri, M. V., *et al.*, Preliminary Report on Speech Research, *Tech. Report 21*, TIFR, Bombay (1967).
18. Stevens, K. N., Acoustic Correlates of Place of Articulation for Stop and Fricative Consonants, *QPR 89*, M.I.T. (1969).
19. Delattre, P., *et al.*, Acoustic Cues in Speech, First Report, Haskins Laboratory, New York (1968: Original French version in *Phonetica 2*).
20. Delattre, P., *et al.*, Acoustic Loci and Transitional Cues for Consonants, *JASA 27* (1955).

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ON THE PREPARATION OF PROGRAMMES FOR THE COLLEGE LEARNER OF A FOREIGN LANGUAGE: A FEW PROBLEMS

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Discussions on the role of Programmed Instruction (PI) in foreign language learning may raise two types of questions: first, those concerning the theoretical problems; second, those that are predominantly practical[1].

By theoretical problems I mean those that relate to the psychological foundations on which programming stands, and by practical problems those that confront a programmer in the actual production and use of programmed materials. The first type includes problems that are both general and particular—those that belong to programming in general and the ones that have special relevance to PI as applied to foreign language teaching.

(A) Programming is an offshoot of the psychology of learning which, as an academic discipline, has of late received a great deal of scholarly attention and effort. For all that, however, it has not won the confidence of knowledgable scholars or practising teachers. There is a lot of dissatisfaction with its performance and disbelief in its results. One extreme expression of this dissatisfaction is found, for instance, in I. A. Richards's thinking on psychology, especially educational psychology:

> 'Educational psychology is not what we want. That, too, is still a toddling infant science and our ordinary tact and skill and common sense are far in advance of the utmost reach of its present purview'[2].

Richards does also not consider educational psychology as something relevant to even the teacher's calling, for in his view:

> 'they could learn whatever they learn from it that will be useful to them *as teachers* much more easily without it, and their time is badly needed for other studies and for reflection'[3].

[1] We are engaged in the preparation of programmed materials for the college learner of English from one part of the country. The preparation of these materials is presenting some problems. This paper is a rewrite of a lecture I gave about a few of these problems to the participants of the Summer School of Linguistics at the Central Institute of Indian Languages, Mysore in May 1970.

[2] Richards, I. A.: *Interpretation in Teaching*, Routledge and Kegan Paul, 1949, p. 9.

[3] Richards, I. A.: *op. cit.*, p. 11.

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Richards's view is certainly one-sided. It is not shared by most others who are equally interested in the subject and who have also made honest efforts to find out the relevance of learning theories to formal classroom teaching. It is also perhaps a little outdated: it belonged to the 1940's.

A more reasonable assessment of the theories of learning, including those aspects which are related to P.I., comes from an analysis of some of the main contributions made by them to human teaching and learning. This analysis leads to two main conclusions. First, that because most theories, particularly those on which PI is based, are derived from animal researches, they do not, in many cases, apply to human situations. Animals make good laboratory subjects; human beings do not. Animal behaviour is much more easily predictable; human behaviour is almost unpredictable[4]. Animals are not tied down to any institutions, whereas human beings in their civilized state depend a great deal on socio-culturals institutions of various kinds. Animals have no history and are not in the habit of handing down traditions and conventions. They are bothered by neither their past nor their future. Generalisations based on the study of animals need not therefore be entirely true of human beings.

A second conclusion is perhaps a little more instructive. It also does a little more justice to learning psychology. It is that most of the well-substantiated findings of psychology are essentially confirmations of ordinary experience; they bring together and sanctify ordinary knowledge. Put in different words, we say that a main task of the psychology of learning has been to systematise, and very often confirm, the hunches of practitioners engaged in this business of teaching and learning.

An example which is of direct relevance to the psychology that lies behind PI may illustrate this point. It refers to 'conditioning' as a psychological principle.

In the seventeenth century Spain there was a playwright—Lope de Vega—who wrote a play called El Capellan de la Virgen (The Chaplain of the Virgin). In this play we are introduced to a character who was very often deprived of his food by some mischievous cats that belonged to the monastery. The man tried but could not chase the cats away. But in the end he found a way of coping with these animals. He put them in a sack and took them out under an arch on a pitch black night. There he repeatedly coughed and associated his coughing with what he calls 'whaling the daylight out of the cats'. This repeated association of coughing and punishing the cats resulted in a very happy situation for the man. Never after did the cats take away his food because as soon as any of them approached him, he would cough and make its flesh creep with the thought of the punishment that would follow.

[4] A good example of the unpredictability of human behaviour are the recent British elections. The pollsters' unanimously predicted a Labour victory; the results belied the predictions almost completely.

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What the character in Lope de Vega's play did is, in its most elementary form, what is known today as classical 'conditioning' in the psychological literature on the subject. The large number of experiments performed by Pavlov and his followers have, of course, added a great deal to both the concept of conditioning and its details. They have also made conditioning a successful instrument in the hands of numerous workers who are engaged in problems of behaviour, animal as well as human. But the basic idea in Lope de Vega and Pavlov is almost the same, and psychology has only systematized and confirmed what existed, even though in a crude form, before the birth of experimental psychology.

This generalisation is true of many other principles and 'laws' in the psychology of learning. Thorndike's laws of learning—of 'readiness', 'exercise' and 'effect', as also the modifications and the 'sub-laws' that he introduced later, all mainly confirm and systematise the experiences of able teachers and understanding parents. So do numerous other findings that belong to the most successful efforts made in the psychology of learning.

A number of questions can be raised on the rationale of PI as well as on the type of psychology that supports it. Programmers, however, have an apt answer to many of these: they say that, for all its psychological failings, PI works. PI produces results. And this has been especially true in its application to subjects such as school mathematics and elementary sciences, wherein the introduction of programming has opened up new possibilities in terms of both speed and efficiency. Nor can we exclude foreign language teaching from the group of subjects which profit from the use of programming. Theoretically, therefore, the programmer, while losing all the battles, manages to win the war.

(B) The more urgent and immediate problems belong to the actual design of materials. These practical problems are also of two kinds. The first kind includes decisions as essential preliminaries to the production of programmes. The second contains those which are experienced on the writer's desk. Let us briefly refer to these in that order.

(B. i) Our first problem is this. Programmed materials are usually auto-instructional. Such materials have distinctive advantages for individual learners of varying proficiency. But in most cases, they also produce fatigue and boredom much more quickly than instruction given with teachers' assistance. In several subjects it has been found that self-instructional lessons of more than 20 minutes' duration begin to operate on 'diminishing returns'. And despite Prof. Skinner's assertion that 'as a mere reinforcing mechanism, the teacher is out of date', we continue to need this outdated creature to sustain the learner's interest in his work. More specifically, practising programmers need to decide not so much whether the teacher is still useful, but exactly how best, when, and for how long is the teacher's intimate contact necessary to motivate the learner to go on learning with maximum efficiency.

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In a situation like ours this decision about the roles of materials as against men is of much more than academic interest. Each full 'unit' of the remedial programmes for the intermediate learner that we are now engaged in producing, takes an hour or more of continuous learning effort. Unaided by human intercourse or encouragement, the learner, we find, does not give the entire unit his undivided attention[5]. Our answer does not lie in the teacher unaided by the programme because, as I have argued elsewhere[6], the teacher of tomorrow in this field will most likely be neither adequately qualified nor suitably motivated to undertake the type of instruction provided in these programmes. But even if this were not true, we have to contend with the programmer's argument, largely supported by experience, that the teacher who succeeds in creating the 'living dialogue' which sustains interest and produces further learning, is no ordinary teacher. Such a teacher is rare in general and rarer still in foreign language teaching.

What is necessary therefore is not to assume too much of qualified human assistance but, at the same time, to utilise the presence of the ordinary classroom teacher where he can contribute most.

(B. ii) A second related problem is that of having to define the areas which lend themselves to programming without creating problems of administration and organisation which are not easily solved in the ordinary circumstances of foreign language teaching in this country. Some areas appear to be much more programmeable than others, some present barriers which, at least now, appear difficult to remove even in happier classroom conditions.

The exact specification of these areas is a task which requires the support of long-term research and experience. But a tentative estimate of what is not conveniently possible is not difficult to make at this stage. Aspects of language whose acquisition requires original thinking or creative effort may for long defy our ordinary techniques of programming and those which depend wholly or largely on human interaction and teacher-student dialogue are equally difficult for any kind of atomised presentation. Also, younger learners, whose learning efforts are greatly facilitated or thwarted by the relations they are able to form with their mates or masters, are less likely to accept programmed manuals or machines as substitutes for men than more mature learners. Rewards and recognition offered by human agencies are also not readily available in working with programmed materials. Nor, in their cases, can machine-produced reinforcement equal the satisfaction given by praise or competition.

For the practising programmer these two problems—(*i*) having to limit the scope of the programme to avoid boredom on the part of the

[5] A series of college-based experimental try-outs are being planned to find out the extent to which these and similar fears are justified and to help us overcome the difficulties caused by the absence of the teacher.

[6] See Tickoo, M. L. in the Bulletin of the CIE. No. 7, 1968-69, pp. 50-52.

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learner and (*ii*) having to delimit the linguistic areas which lend themselves to productive programming, are among the most urgent and difficult.

A second set of practical problems belongs to a different plane in a programmer's work. To look at them, let us take it that he has selected a language area and is now engaged in the design of programmed materials, in our case a Pupil's textbook for a specific purpose. What are some of the main problems he is likely to face and what do they tell us about the present possibilities of programming in the specified areas?

To answer this we must briefly go over some of the preliminaries of programming.

A programme is something that is designed to provide the skills and knowledge that are necessary to lead specified individuals to clearly prescribed testable competence and performance in a field or subject through well-defined and tested 'steps'. It can also be defined as a sort of disciplined approach to instruction which begins in behavioural analysis, is characterised by empirically determined behavioural sequences and results in explicitly described terminal performance. The main elements of an instructional programme as seen in both definitions are (*i*) specified individuals, (*ii*) clearly prescribed and fully-defined end-performance and (*iii*) 'steps' incorporating elements of skills or knowledge fully tested for their efficacy in producing the know end-products, and (*iv*) empirical testing at each stage.

These four essentials are by no means the only important ingredients of an actual tried-out and validated programme. There are others, including the learner's involvement at each step, the provision of adequate reinforcement and the use of different techniques and devices to heighten the instructional possibilities of the programme. We shall, however, concern ourselves with only these four in our brief review of the programme designers' problems.

(*i*) The first prerequisite of a good programme is the exact specification of the programme users. This includes details about the learners' previous background, their ability to do things, that are related to the programme their motivation, their aims in learning what they want to learn, and their purposes in learning it. It should also mention the details of the learners' present competence and performance in different skills or different aspects of language acquisition. In short, the programmer should be able to say almost everything about the learners' past or present that has any relevance to their ability to profit from the materials and methods of the programme. In addition he ought, as far as possible, to be able to state not only what they know or seek to know but also to estimate their ability to do things at various stages in their use of the programme.

One formidable problem in language programming comes from this need to define our 'customer'. Evidently it is easy to specify his 'surface structure'—his age, the years or the exact hours he has been learning the

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language, his mother-tongue or any other tongues that he may have taken lessons in or found necessary for use, before he starts learning the language being taught and so on. These details, though extremely useful, in practice add up to only a small part of what is required in an exact specification of the learner. The really difficult problems lie in our attempt to measure his language acquirements and competencies, especially at the relatively advanced stages of learning.

To begin with we do not yet know what exactly is involved in the acquisition of a new language. Here we are left with opinion rather than with proved or ascertained facts. For some authorities language acquisition consists chiefly of skills which together make up linguistic competence; for others skills and habits form only a part of what is called 'knowing a language'. Some even doubt if language acquisition can be explained at all in terms of skills and habits.

Here, for example, is one of Noam Chomsky's recent pronouncements on the subject: 'A good deal of the foreign language instruction that's going on now, is based on the assumption that language is a habit structure, that language is a system of skills and ought to be taught by a drill and by the formation of stimulus-response associations. I think the evidence is very convincing that that view of language structure is entirely erroneous, and that it's a very bad way—certainly an unprincipled way —to teach language ... Our understanding of the nature of language seems to me to show quite convincingly that language is not a habit structure, but that it has a kind of a creative property and is based on abstract formal principles and operations of a complex kind'*.

Secondly, if we nevertheless continue to take the 'old-fashioned' view that language acquisition, except at a level of competence which very nearly approximates that of the native speaker, does mainly rest in the four major skills of reading, writing, listening and speech, we have to seek the means by which we can measure each of these with a degree of certainty and find out the learner's proficiency in one or more of these. In the present state of our knowledge or ignorance this too appears to be difficult. It is difficult in part because, as Noam Chomsky points out, the learner's performance, at least for some areas of language, does not, even in the best of circumstances, spell out his competence. But it is more so because our scales of measurement leave much room for improvement. What they show *in these areas* is not enough to justify the programmer's objective statement about what is known or not known to a group or class of learners.

A precise yet comprehensive statement of the entrance behaviour is therefore not altogether within our grasp at this stage. Specification of the learner appears to be a more difficult task in foreign language programming than it is in subjects like mathematics or elementary- and intermediate-level natural sciences.

* 'Noam Chomsky's view of language' by Alasdair MacIntyre in *The Listener*, Vol. 79, No. 2044, p. 690.

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(*ii*) As one would expect, our second essential—the definition of the 'terminal behaviour'—presents the same difficulties as exist in the case of the specification of the entrance behaviour. But in this case there is an additional factor to complicate the situation. It is that a clear specification of the end-result must be made in terms of our statement of what the learner comes with at the beginning of the programme. So if, as is bound to happen in many cases in programme design, the statement of the entry behaviour suffers from want of fullness or scientific rigour, the statement of the terminal behaviour can hardly be any better.

(*iii*) We next come to 'stepping'. In the literature of PI a lot of argument centres round stepping and step size. Some doubt if small steps are suited to all types of learning and if atomizing is the best way of presenting the material. In language studies in particular meaning, which constitutes the essence of communication, is without doubt the most neglected aspect in theoretic discussion. Introduction of 'stepping' may add to its neglect in practical pedagogy.

Other question the wisdom of attempts to weed out 'steps' which do not work with the vast majority of learners. Such attempts at over-simplification, though they are justified in terms of pass percentages and statistics, do also, in most cases, take away the greater half of the challenge that is vital to good teaching, and effective learning. Good teaching must include exercises which require genuine thought and action and which, when solved, bring joy to the learner. 'Steps' can also be criticised on a different count. If learning or remembering involves 'an effort after meaning', teaching which reduces the need for effort should, to that extent, also reduce the possibilities of effective or efficient learning.

In spite of all these criticisms, however, the notion of 'stepping' does appeal to the foreign language teacher of today. It does so because it is interesting and yet not altogether new. Those of us who have had the experience of designing or using 'structural' courses for learners of English as a Foreign Language know all too well the main purpose in grading at the earlier levels: it is to 'stage' the material in such a way that the learner is neither discouraged and overawed by the introduction of too many items, nor starved for want of anything new.

Good grading mainly depends on the maintenance of a balance between too much and too little. But especially at the earlier stages, it also rests in organising of the material in such a way that (*a*) everything that is new is closely linked with everything that precedes it and, (*b*) that the new and the established together not only assimilate a part of the linguistic description but also imply the description in full. This is also characteristic of 'stepping' at its best.

C/iv. But there is a difference of no mean proportions. Unlike structurally graded materials of one type or another, programmed materials have in them the built-in provision for testing at each stage. Every 'step' and every 'unit' of a programme becomes complete only after the learner

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has undergone a test which tells the programmer what has or has not been learnt and, simultaneously, provides the learner the much-needed reinforcement for further effort. Tests, which often differ from one type of programme to another, are at once the most essential and, in some ways, the most rewarding feature of PI.

For all their promise and performance, however, the two main types of tests—the Skinnerian 'constructed-response' test and the Crowderian 'multiple-choice test', as also their variants or possible combinations, leave a serious doubt unresolved. The doubt is this: does success at one or all of these 'tests' guarantee learning? Or, in other words, is there a visible and definable relationship between test responses and actual achievement?

The main reason for our doubt is this. Tests which form part of any language programme do not, in the vast majority of cases, require the learner to use the language item or items being taught; they only call for recognition or recall of what has been learnt in a 'frame'. Here is an example.

At the end of a programme 'frame' on the use of the definite article in English for the intermediate-level learner, the tests given to assess the results may take one of two-forms. We may give the learner a blank-filling exercise, in this case, without necessarily specifying the position of the blanks. The learner may be told that from the passage given X definite articles are missing and be required to supply these definite articles at their appropriate places. Alternatively, if the learner has also learnt the use of the indefinite article (a, an) and the 'zero' article, he may be asked to fill the blanks using the articles or to make sentences by 'matching' or combining two or more sentence parts. In the latter case he will most probably choose from one of four possible slot fillers—'the', 'a', 'an', and 'zero'.

Both these types, as also their many variants, if well prepared, should tell us with a measurable degree of accuracy whether and to what extent the instruction given through the programme unit or frame has gone home to the learner. They should tell us a great deal about the quality of the programme and its immediate gains and show the suitability or otherwise of the programme for the learners under instruction.

Add to all this the fact that in the literature on objective testing there is no experimental evidence for the growing belief that these tests fail to tell us anything about the learners' competence in the habitual use of the language for everyday needs, and we ought to feel greatly satisfied with their performance. A combination of several reasons makes us doubt, however, if such tests in their present state of development (even though they are admirably suited to the narrowly defined purposes of a programme 'frame') can or do serve as efficient instruments towards the broader objective in foreign language teaching, which is to produce the ability

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to make use of the language in its written or spoken form. Three of these reasons require specific mention in the context of the programmes under consideration.

The first reason is this. At the intermediate stage (also known as the PUC or Junior College stage) one main concern of the teacher or programmer is to repair the damage done during the period of schooling that has preceded. Every programme therefore, whether it is avowedly remedial or not, has to give a lot of conscious attention to correcting the errors, and most tests, whether deliberately or otherwise, must concentrate on 'examining for error' much more than on 'examining for achievement'. The best part of each test is therefore a test of well-known problems in a particular area (viz. pronunciation, vocabulary or grammar and usage) of language use rather than of the use of language in effective communication. And with our growing though as yet imperfect, understanding of the errors caused by L_1 and L_2 contrasts, a tester is most likely to construct tests with these errors in view. Tests of this type naturally leave out a whole gamut of actual or potential problems in successful language use.

Secondly, in programming it is usual to concentrate on one skill at a time. This has its obvious advantages. Among other things, it facilitates 'frame'-construction and also makes an accurate measurement of results a relatively easy undertaking. But there is the other side of the coin which appears to have stayed hidden hitherto. It is that language skills do not usually operate by themselves. Each one forms part of a complex whole which, in its composition, is linked with other major skills as also with some extra-linguistic factors. Good tests in language must take cognisance of what George Perren rightly terms as 'a vast, ill-defined, and shifting range of behaviours'. The art of testing in its present state of development does not provide for this.

Thirdly and lastly, there is the most important question of the 'transfer' from what is tested to what is needed. This is, in part, based on what was said earlier about 'examining for error' as against 'examining for achievement'. It also calls into question the testers' belief that the selected parts represent the totality of foreign language behaviour.

Much more than these two, however, it is related to the fundamental question referred to earlier. Our ignorance of what constitutes language acquisition coupled with our failure to give due weightage to many sizeable elements of what we tentatively take as representative skills of meaningful communication, have produced a situation in which, with the best of objective tests, we are still left with misgivings about the extent to which what is measured approximates to what is essential for language use. Does good performance in, for example, a test in oral comprehension, which utilizes both segmental and supra-segmental discrimination tests, mean that the learner will use 'language as speech' effectively for ordinary communication? Or does it leave out a lot that can tilt the balance in the opposite direction? If it is be the former, why then does one come

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across instances of foreign speakers whose speech jars on the native and the non-native ears alike and, on occasion, fails to put across the intended meaning, in spite of their near perfect use of phonemes or phonemic contrasts? But if it be the latter, what must our tests do better or do differently than they do now so as to make the 'transfer' from the tested to the needed a much clearer possibility?

These then are some of the vexing issues that face us in our attempt to design result-producing, self-instructional materials for the intermediate- and relatively advanced-level learner of a foreign language. There are others too. Some, like our helplessness on finding that to ask for a programme-designer who is both an able writer and an able student of the foreign language, is like asking for the moon, have to be accepted as being part of the pattern. Some, like the absence of usable and comprehensive contrastive linguistic studies especially in the areas of grammar and usage, are perhaps a temporary phenomenon. Many of the problems raised in the discussion above will also, we hope, solve themselves with experience or through experiment, though some, at least at present, appear much more intransigent.

For the committed programmer even the less viable aspects of programming may appear to present no problems. He already sees, as I heard one enthusiast say in his defence of programming earlier in the day, 'beaming faces full of purpose and full of promise'. For those of us, however, who are not so keen to jump on the bandwagon, there is all the reason in the world to keep an open mind to the possibilities of each new innovation in educational technology, but at the same time, to guard against anything which, in building a facile faith in some 'miraculous solutions', makes the language teachers' job even more difficult than it is today.

In what I have said this afternoon, I have only raised a few of our questions and misgivings in attempting to programme for a specific need. I have said nothing about either the possibilities of programming or about the ways in which the less knottier of the problems can approach their resolution. For the former we can go to the works of many able exponents of PI, for the latter we must await the results of classroom-based try-outs and experiments. At the Central Institute of English we are now battling with the preliminaries of some such inside-the-classroom studies and experiments. Before long we should have at least a few tentative answers.

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PAPERS and TALKS

Presented and
delivered at the
Summer School of Linguistics
1970

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